# PERIODICAL ROOM GENERAL LIBRARY UNIV. OF MICH. THE AMERICAN School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION

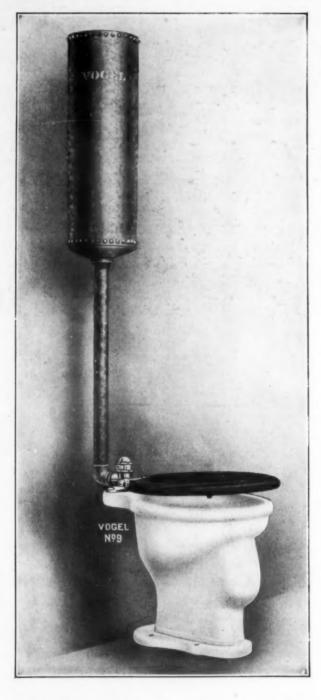


OCTOBER-1926

The Bruce Publishing Company Milwaukee, Wis.

## WOGE I

### Number 9 Automatic School Water Closet



These closets are made to stand the rough usage of the school water closet.

Economical in the use of water.

Seldom requires repairs.

Easy of access when repairs are necessary.

The simplest and most durable automatic water closet.

Many Thousands in use.

Sold by Wholesalers of Plumbing Supplies Everywhere

JOSEPH A. VOGEL CO.

Wilmington, Delaware

St. Louis, Missouri



Science Lecture Room Milton High School Milton, Mass.

## NATURAL SLATE BLACKBOARDS NEVER WEAR OUT!

No matter how constantly and severely Natural Slate Blackboards are used they will always remain as fine as the day they were installed.

Natural Slate is Sanitary, Dustless, Fire-proof, Easy-To-Write-On, Easy-To-Clean, Economical. No wonder authorities on the building and maintaining of Schools recommend Natural Slate as the best material obtainable.

You, too, after having an actual experience with Natural Slate will become a staunch supporter.

Natural Slate Blackboards are now available for immediate shipments.

Write for the interesting and complete story on Natural Slate Blackboards.



NATURAL SLATE BLACKBOARD CO.
108 ROBINSON AVE., PEN ARGYL, PA.

#### Regard These Schools That Have DUAL THERMOSTAT Control

High School, Greensburg, Pa.

Washington School, Altoona, Pa. Kingsford Heights School, Iron Mountain, Mich.

High School, Eau Claire, Wis. Sacred Heart School, St. Paul, Minn.

St. Thomas School, Minneapolis, Minn.

High School, Winona, Minn. Grade School, Kerkhoven, Minn.

Senior High School, Marquette, Mich.

High School, Cudahy, Wis. Anson Junior High School, Marshalltown, Iowa.

High School, Marshalltown, Iowa. Ahrens Trade School, Louisville, Ky.

Ardsley School, Ardsley, New York. Lincoln Jr. High School, Rockford, Ill.

Grade School, Forest Park, Ill.

High School,
Ellwood City, Pa.
Taylor Allerdice
High School,
Pittsburgh, Pa.

High School, South Euclid, Ohio.

Grade School, Berwyn, Ill.

East Side Jr. High School, Terre Haute, Ind. School No. 1, Edina Mills, Minn.

Grade School, Libertyville, Ill.

Vocational and Recrea-tional School, Oshkosh, Wis.

Public School 130, Auburndale, N. Y. Public School 35.

Brooklyn, N. Y.

Sterling-Morton School, Cicero, Ill.

St. Mel's School, Chicago, Ill.

Theology Building, Chicago University. School Addition, Barrington, Ill.

Deerfield-Shields Twp.
High School,
Highland Park, Ill. High School, Cleveland Heights, Ohio.

Boulevard School, and Grade School "E," Shaker Heights, Ohio. Upson School, Euclid Village, Ohio.

Miller School,
Salina School,
Ford School,
Thayer School,
Springwell, Mich.
Washington School,
Cudahy, Wisconsin.

High School, Riverside, Ill.

Garden Village School, Breitung, Mich. Holy Angel School, St. Cloud, Minn.

High School, Kankakee, Ill. St. John's School, Canton, Ohio.

High School, West Chicago, Ill.

Opportunity School, Denver, Colo.

Denver University Stadium, Denver, Colo. Grade School, Garfield Heights, Ohio.



#### Success of THE DUAL THERMOSTAT Again Stamps Johnson Leadership

RVERY notable improvement in automatic temperature been, for 41 years, of Johnson invention and perfection. VERY notable improvement in automatic temperature regulation has has made and maintained leadership in this phase of the heating and ventilating industry. Again Johnson leaps farther to the fore-front, with the invention, perfection and addition of The DUAL THERMOSTAT-whereby vacated or unused rooms, departments or entire floors of a school can be instantly shut off of heat, with heat only for occupied rooms of the building remaining on: night classes, evening auditorium programs, etc.; for example. While, too, Johnson Dual Thermostat system makes heat available in any room and part of the building to be used, when heat in the balance of the building is turned off. The details of this additional Johnson fuel saving, heat regulating convenience are too significant to let pass by unnoticed. And the Dual Thermostat success in the many various schools is evidence sufficient that your schools too should be so equipped.

#### JOHNSON · SERVICE · COMPANY

Main Office and Factory, MILWAUKEE, WISCONSIN

AUTOMATIC TEMPERATURE REGULATION SINCE 1885 TWENTY-NINE BRANCHES - UNITED STATES AND CANADA

## SYSTEM OF TEMPERATURE AND HUMIDITY CONTROL

The Dual Thermostat . . . . System . . . .



The All Metal ... System ...

# Steel Water Heaters



CITY WATER PRESSURES Standard 60 pounds Extra Heavy 100 pounds Sizes 130 to 700 gallons per hour

Tabasco Water Heaters are built of the same grade steel plate, and riveted together in the same faultless manner, as the famous Kewanee Boilers. They won't crack and leak in service but cheerfully supply an abundance of hot water year after year.

AND they burn every kind of coal and oil fuel or gas efficiently, without any fuss or coaxing.

AGAIN why risk cancellation of insurance where city water pressure exceeds thirty pounds when SAFETY, with economy, can be secured by installing a Riveted Steel Tabasco Water Heater?

Surface Burner (as shown) Magazine Feed



## KEWANEE BOILER COMPANY

KEWANEE, ILLINOIS

Steel Heating Boilers, Radiators, Tanks and Water Heating Garbage Burners

#### **BRANCHES**

NTA, ON. 1140 Little Bldg., 90 Boylston St. LOTTE, N. C. 605 Johnston Bldg. TANOOGA, 1104 James Bldg. AGO. 322 W. Washington Blvd. ATTANOGA,
ICAGO, 222 W. Washington Blvd.
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EVELAND, Superior Ave., N.E., at 17th St.
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NVER, 1226-28 California St.
S MOINES, 707 Hubbell Bldg.

BRANCHES

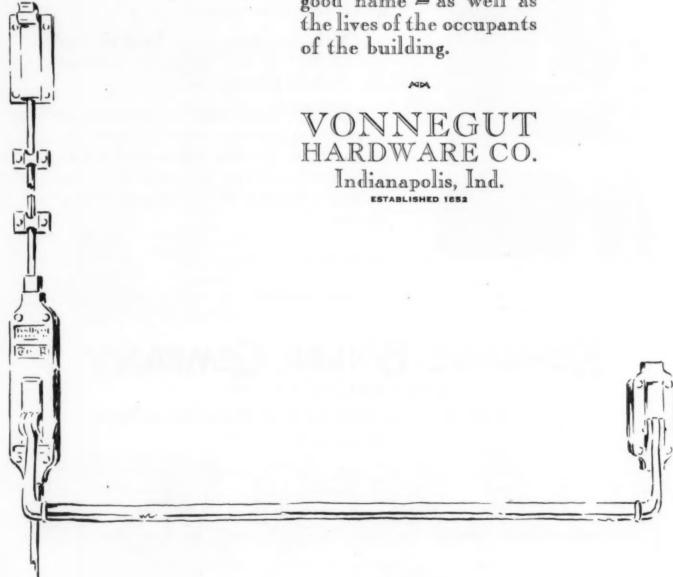
DETROIT, 2051 W. La Fayette Blvd.
EL PASO, 1520 N. Campbell St.
GRAND RAPIDS, 402½ Mich. Trust Bldg.
INDIANAPOLIS, 221 Ind. Term. Warehouse
KANSAS CITY. 2014 Wyandotte St.
LITTLE ROCK. 313-15 E. Markham St.
LOS ANGELES, MEMPHIS, MILWAUKEE, MINNEAPOLIS, 708 Builders Exchange Bldg.
MINNEAPOLIS, 708 Builders Exchange Bldg.
SC.—Dominion Kowanne Bollet. C. Ltd. 66 Rich. CANADIAN REPRESENTATIVES-Dominion Kewanee Boiler Co., Ltd., 66 Richmond St., East, Toronto 2, Ontario

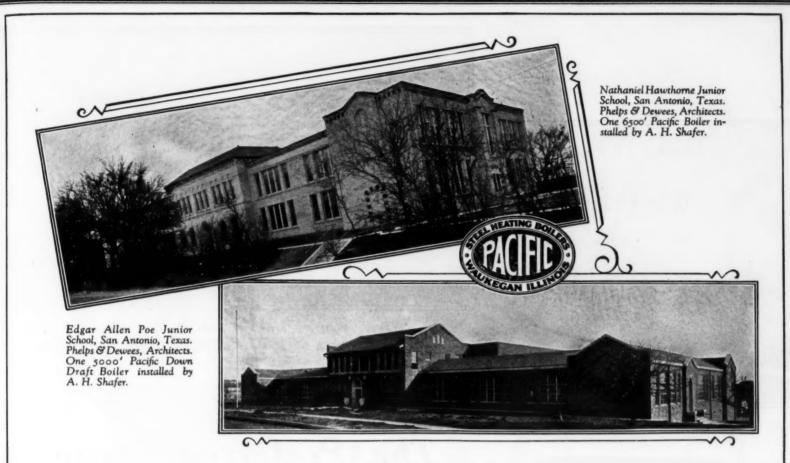
NEW ORLEANS, 1018 New Orleans Bk. Bldg,
NEW YORK. 570 Seventh Ave.
PHILADELPHIA, 806 Real Est. Trust Bldg,
PHITSBURGH, Empire Bldg.
ST. LOUIS, 4200 Forest Park Blvd.
SALT LAKE CITY,
SAN ANTONIO, 5AN FRANCISCO, 537 Mission St.
SEATTLE, 326 Columbia St.
TOLEDO, 415 13th St.

# Von Auprin

Self-Releasing Fire Exit Latches

Specifying Von Duprin latches protects your good name = as well as the lives of the occupants of the building.





## San Antonio 8 Pacific Heated Schools

In 1923 this progressive city of southern Texas built eleven modern school buildings. Pacific Steel Heating Boilers were selected for eight of these schools—another striking example of Pacific leadership and Pacific adaptability to local climatic conditions.

Pacific Steel Boilers are built to develop high efficiency through a long life of trouble-free service. Three Pacific construction features—greater direct heating surface, larger combustion space, longer fire travel—maintain this efficiency whether operating above rating in severe winter climates or below rating where winters are milder.

Pacific Steel Boilers burn hard or soft coal, oil, or gas. Fit compactly into small spaces. Easily operated, easily cleaned, absolutely dependable.

Pacific Boilers will meet school heating requirements in your community. Let us send you complete information.

GENERAL BOILERS COMPANY, Waukegan, Illinois
BRANCH OFFICES IN PRINCIPAL CITIES

PACIFIC STEEL HEATING BOILERS





(Above) Walbridge School, St. Louis, Mo., R. M. Milligan, Architect.

(Left) High School, Middletown, Ohio, Thomas D. McLaughlin

& Associates, Architects.



Spencer Patented clincher coupling. Easily locked or opened. Cannot scratch or mar floors or furniture. Also avoids trouble incident to injury of metal couplings and their consequent failure to couple.

This is only one of the many exclusive features that demonstrate Spencer superiority.





The Multi-Stage Turbine

## The Preferred Cleaning System for Schools -

Because of its thorough adaptability to every school cleaning requirement — and its superiority over other systems of vacuum cleaning, Spencer is the preferred cleaning system for schools.

Designed especially for school service, the Spencer System cleans bare floors, walls and woodwork and does it without the necessity of moving anything. It operates efficiently under chairs, tables, and desks, behind bookcases, pianos and cabinets and gets into ordinarily inaccessible corners with ease and rapidity. By using certain attachments, the Spencer System can also be used for cleaning return tubular or horizontal sectional boilers.

Over 1,200 school installations throughout the entire United States is proof, beyond doubt, of Spencer efficiency and popularity in school service and use.

The recommendations of our Engineering Department may be obtained on any cleaning problem without cost or obligation.

Write for list of school installations and complete data regarding Spencer equipment.

The Spencer Turbine Company HARTFORD, CONNECTICUT

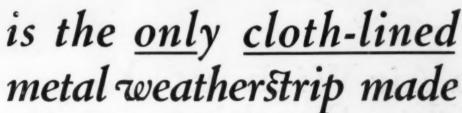
S.P.E.N.C.E.R CENTRAL . CLEANING . SYSTEMS

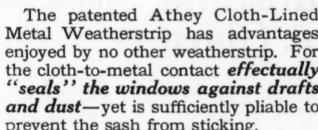
## Only a cloth-to-metal contact can "Seal" windows from drafts

Cloth-Lined Metal Weatherstrip

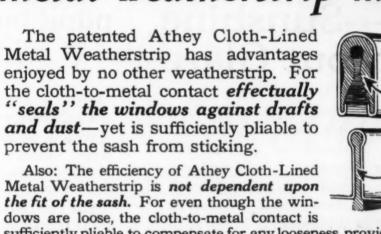
WINDSOR

CLOTH





sufficiently pliable to compensate for any looseness, providing a perfect "seal" and also preventing windows from rattling.





Athey Cloth-Lined Metal Weatherstrip is made for either wood or metal sash. Some time ago one of the leading makers of metal sash, after making exhaustive tests of all types of weatherstrips, sent the following bulletin to their representatives:

"Athey Weatherstrip is the best we have seen for this purpose and can be readily applied after sash is erected or glazed. It can be used for pivoted, projected or casement windows."

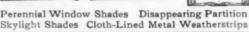
Tests made by a prominent firm of New York Architects show that during a 15 mile wind the air infiltration through a window **not** weatherstripped amount to .75 cubic feet of air, per minute for each lineal foot of perimeter.

These same tests established the fact that with ordinary metal weatherstrip the air leakage amounts to .29 cubic feet; while with cloth-lined metal weatherstrip the leakage was reduced to .08 cubic feet.

This shows the great necessity of weatherstrip and further shows

the greater efficiency of cloth-lined weatherstrip such as the Athey.







6003 West 65th Street - Chicago, Illinois

In Canada: CRESSWELL-McINTOSH, Reg'd 270 Seigneurs St., Montreal, Que.



## Fresh Air Without You can reason with a bad Draught—Sunshine Without Glare



Note this ingenious modern solu-tion of the combined shade and ventilation problems in the Truscon Donovan Awning Type Windows. All Sash operate from the lower as man-ual, or separately. A child can open or close all sashes at once with ease.

Truscon Donovan Awning Type Windows are school windows, specially designed to provide the proper diffusion of light and the better regulation of natural ventilation in school rooms. In Truscon Donovan Windows fire safety is an important feature. Double Contact Weathering excludes rain and wind and dirt. They can be conveniently cleaned from the inside. They operate quietly without pole. May be used just like an awning. Are built throughout of permanent, rust-resisting copper steel.

> A catalogue fully describing these windows will be sent to you free upon request.

TRUSCON STEEL COMPANY Youngstown, Ohio

Stocked by dealers in all Principal Cities.

#### SHADE IS ONLY AS GOOD AS ITS ROLLER



## pupil but not with a bad window shade

As MUCH of a teacher's energy can be used up on a bad-acting window shade as on a bad-acting pupil.

Why experiment with shades? To make sure of perfect service simply specify that all shades be of Hartshorn manufacture. Be particularly sure that every shade is mounted on a genuine Hartshorn roller.

You may be told that other rollers are just as good as the Hartshorn. But remember this: Stewart Hartshorn in 1864 invented the window shade as it is known today. Hartshorn Rollers contain his mechanism. For 60 years it has proved its superiority.

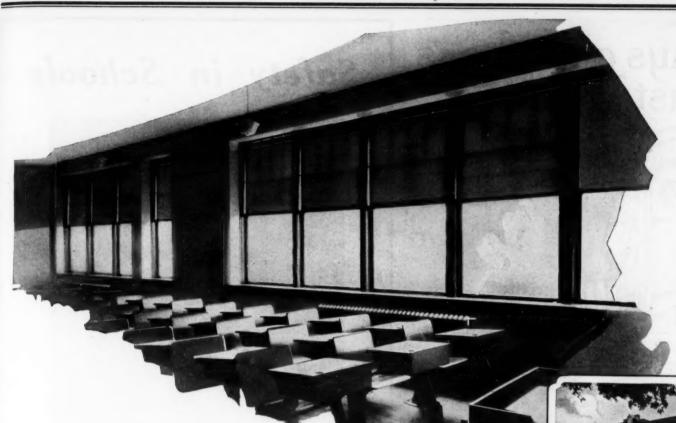
Maps and charts are expensive - mount them on Hartshorn rollers.

For window shades that will meet your needs exactly, specify Hartshorn's Oswego Tinted Cambric Shade Cloth mounted on Hartshorn Rollers with No. 86 or No. 87 double brackets.

> WRITE FOR NAME of dealer through whom you may secure Hartshorn shade products and for samples of colors: Sage, Linen, Putty, Dust, Dill, in Tinted Cambric especially adapted for school use.

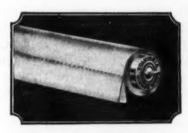
Hartshorn **PRODUCTS** Established 1860

STEWART HARTSHORN CO., 250 FIFTH AVE., NEW YORK CITY



The Bedford High School, Bedford, Pa., is completely equipped with Columbia Shades and Columbia Metal Rollers.

# Better Shades mean Better Grades



ROUBLE-PROOF is the word that best describes the Columbia Roller. Its spring is silent, rugged and smooth-running. Its bras ferrules are nickel-plated—hence, rustproof. Yet they sell for substantially the same price as shades and rollers which lack their desirable features.

You can save time and trouble by
using the Standard Specification for
Window Shades which we'll gladly
send on request. A specimen roller
and samples of Columbia Cloth are
sent with the specification. Just fill
In coupon and mail to The Columbia
Mills, Inc., 225 Fifth Ave., New York.

 Name

 Street

 City
 S-10-26

Probably you have never thought of daylight illumination as something that could be improved. Perhaps you have said: "plenty of windows for every classroom and everything will be all right."

The fact is that daylight can be improved—vastly improved—by toning it with a new and modern type of window shade. Columbia Shades, in soft translucent tone colors, filter all the harsh eye-straining rays out of sunlight—mellow the concentrated glare from the windows into a pleasant, diffused glow that reaches the farthest corner of the room. And how different from the customary dark opaque shades which bar out light and cast gloom over the classroom! Columbia Shades offer you the happy medium—just enough light—never too much, never too little.

Why not try toned light in your building? See what correct daytime lighting will do for your pupils. Watch grades and discipline go up. Watch the bills for artificial lighting go down!

And toned light is no extra expense. Columbia Shades cost no more than ordinary, old-fashioned shades. And Columbia durability is noted. All over the country, we can point to school installations where the annual replacement cost averages only twenty-five cents for every one hundred dollars of original expenditure.

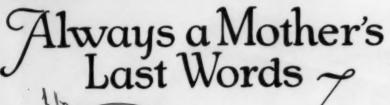
expenditure.

Check up your window shade equipment now. Let us send you (without cost or obligation to you) samples of Columbia Shade Cloth and a specimen Roller, together with a copy of Columbia Standard Specifications for Window Shades. The coupon is for your convenience.

The Columbia Mills, Inc. 225 FIFTH AVENUE, NEW YORK

Boston Chicago Cincinnati Cleveland Detroit Fresno Pittsburgh Kansas City New Orleans Philadelphia St. Louis Portland (Ore.) San Francisco Minneapolis Los Angeles

Columbia Window shades and Rollers





Mothers know that children forget to be careful. They know, too, that motorists forget to "drive slowly" past school grounds.

For dependable safety, school grounds should be enclosed with Cyclone Fence. If your schools are not fence-enclosed, consult a Cyclone engineer. Do your part to promote school-safety.

Phone, wire or write nearest offices for complete information on Cyclone Fence for schools.

#### CYCLONE FENCE COMPANY

Factorics and Offices: Waukegan, Ill., Cleveland, Ohio, Newark, N. J., Fort Worth, Texas.

Pacific Coast Distributors:

Standard Fence Co., Oakland, Calif. west Fence & Wire Works, Portland, Ore.

Reg. U. S. Pat. Off.



CYCLONE COPPER-BEARING STEEL ENDURES

@ C. F. Co. 1926

## Safety in Schools



School officials, who are responsible for the protection of the lives of the pupils and are anxious to make proper provision for quick exit in case of fire or panic, will

#### SARGENT

#### Fire Exit Door Bolts

an adequate equipment which meets all conditions. The Sargent Cylinder Locks with which they are fitted provide for complete security and prevent entrance from the outside of the building when school is not in session, while they can be arranged to permit entrance during school hours, if desired.

#### Quick Exit at All Times

is provided and in case of necessity the doors can be instantly opened by slight pressure on the handle bars at any point.

#### Door Checks

close the doors, during their day by day use, quickly and quietly, the application shown in the illustration with the Sargent special foot (No. 35) being particularly desirable.

> Sargent Fire Exit Door Bolts, Locks and Hardware are sold by representative dealers in all cities.

#### SARGENT & COMPANY

Manufacturers

Chicago

New Haven, Conn.

New York

UNIVENT and Glass - make the difference





Univent Equipped
Cleveland Heights High School, Cleveland, Ohio,
Wallace Q. Nesbut, Director of Schools
Franz C. Warner & W. R. McCornack, Architects
Mayer & Valentine Engineers
Cleveland, Ohio



**VENTILATION** 



POR the same reason that glass has been used for centuries, to let in the sunlight, independent of the vagaries of the weather, the Univent is used, today, to bring outdoor air directly into the room, without regard to storms, snow, rain, smoke, dust and nerve-wracking outdoor noises.

Univent and Glass make the difference between primitive life, where man must take what nature gives him—and modern life, with the enjoyment of fresh, clean, comfortably warmed outdoor air, within the protecting walls of the schoolroom.

Your pupils and teachers can enjoy air with all its outdoor vigor, every day of every season, in schoolrooms equipped with the Univent. Thousands of schoolrooms know its benefits today, and recognize, in the Univent, the highest and yet the simplest development of Ventilation.

The reasons for their choice are contained, with many other interesting facts, in the book, "Univent Ventilation." Write today, and let us send your copy.

Mfd. only by THE HERMAN NELSON CORPORATION, Moline, Ill.

Builders of Successful Heating and Ventilating Equipment for 20 Years

Sales and Service

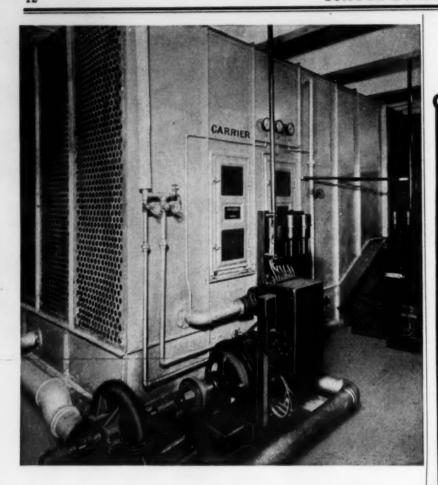
BELFAST, ME. BOSTON NEW HAVEN NEW YORK CITY SYRACUSE PHILADELPHIA SCRANTON PITTSBURGH GRAND RAPIDS DETROIT CLEVELAND

COLUMBUS TOLEDO INDIANAPOLIS CHICAGO DES MOINES MILWAUKEE MINNEAPOLIS

SAN FRANCISCO EMPORIA OMAHA KANSAS CITY

DENVER
SALT LAKE CITY
SPOKANE
FORTLAND

SBATTLE VANCOUVER TORONTO



# Wholesome Air for Healthy Pupils

You who select ventilating equipment for schools bear a weighty responsibility. If you choose equipment that does not provide the proper atmospheric conditions, you condemn thousands of children to headaches, mental fatigue, restlessness and often worse. You stunt their physical growth and dwarf their mental capabilities.

When you specify Carrier Air Washers in your schools you are sure to have CLEAN air — it is actually WASHED, not strained. You have equipment that is simple to operate, consequently it will not be neglected by janitors. You have "life-time" apparatus, without continual added cost of "replacements."

Many of the finest schools in America are equipped with

#### Carrier Air Washers

If you are not familiar with the recent improvements in Carrier Air Washers we'll be glad to send you interesting data.

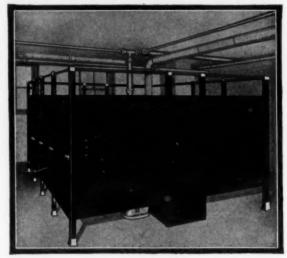
#### CARRIER AIR CONDITIONING COMPANY OF AMERICA

186 Mortimer St.

Buffalo, N. Y.

In Canada—Canadian Blower & Forge Co., Ltd. Kitchener, Ont.





St. James School, Decatur, Ill.

#### Sanymetal is Part and Parcel of the Modern Toilet

SANYMETAL individual metal toilet and shower compartments have become a necessity for school buildings. They are as much a part of your modern toilet room as the plumbing fixtures. They make sanitation a certainty. They are not easily marred or defaced. And the fact that they are good for the life of most any school building makes them a genuine investment in durability.

Sanymetal Products for Schools are: Toilet, shower, dressing and urinal compartments. Corridor and smoke screens. Metal doors and wainscot. Sanymetal Gravity Hinges. Write for New Catalog No. 15.

## The Sanymetal Products Co.

1703 Urbana Road Cleveland, Ohio



## The same old items of cost—

Repainting or repairing rusted roofing on the school building.

Replacing rust-eaten gutters and downspouts.

Trouble with leaky or rust-clogged water pipes.

The bills paid, what then? Will the same old items of cost come up again?

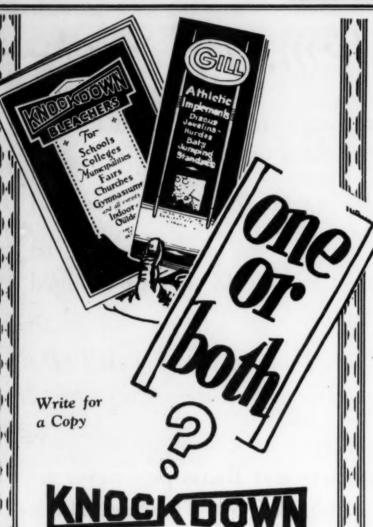
Copper roofing, Copper downspouts and gutters and Brass pipe never repeat as items of cost. They cost a little more at first but that is the last expenditure. They are rust-proof.

The Girls' Catholic High School recently completed in Brooklyn, N. Y., is Brass-piped, has Copper sheet metal work and Bronze hardware and lighting fixtures. Robert J. Reilly is the architect.

## COPPER & BRASS RESEARCH ASSOCIATION

25 Broadway - New York





This book is chock full of information on seating crowds in comfort.

It shows how waste space can be profitably used and shows completely the construction of these famous bleachers. It gives all necessary data to get accurate prices.



A handbook and price list of Gill Athletic Equipment, listing Bats, Javelins, Hurdles, Discus and Jumping Standards.

It gives information about the selection of wood and about the careful construction of this equipment.

LEAVITT MFG. Co.
URBANA, ILL.

1	LEAVITT MANUFACTURING CO.
	Department S-4, Urbana, Illinois
	Please send me without obligation a copy of
	☐ Knockdown Booklet ☐ Gill Booklet
	Name

# Save money on school repairs Five ways to do it

The five products described below will help you cut down your maintenance expense. School boards all over the country have used them for years. They find them valuable in keeping their buildings in first class shape at minimum cost.

#### 1 Concrete floors

A treatment of Lapidolith will make dusty, easily-wornout concrete floors a thing of the past.

Lapidolith looks much like water and is just as easy to apply. Concrete floors treated at night are ready for business in the morning. One treatment will add years to their wear.

The action of Lapidolith is chemical. It penetrates the porous cement, binds the loose particles together, and fills up the voids. It gives your concrete floors an even, close-grained surface that is flint-like in its hardness.

#### 2 Wood floors

Lignophol will keep your wood floors in excellent condition at a very low cost. This preservative floor dressing does away with the use of floor oils. It will keep your wood floors from splintering, rotting, or drying out.

Lignophol penetrates the wood fibres and restores the natural gums and oils. It gives you dustless, smooth, sanitary floors. One treatment will last for years.

#### 3 Painted surfaces

Every school building has to be repainted from time to time. But Cemcoat will make repainting time come around less often. Cemcoat is a gloss, egg-shell or flat enamel paint whose wearing qualities are astonishing.

Cemcoat can be washed again and again. Because of

its heavy body it usually requires one less coat on a given surface. It does not crack or peel even on a brick, plaster or concrete wall. Cemcoat is made for exteriors as well as interiors, in white and colors.

#### 4 Roofs

Stormtight will stop roof leaks quickly and easily. If Stormtight is applied to the entire roof it will give you permanent leak insurance.

This thick, adhesive, rubberlike substance can be applied by anyone to any roofing material. It is not a temporary makeshift. It has saved the cost of a new roof many times.

Stormtight comes in both semi-liquid and plastic form. If you have an old roof that seems due for renewal, save the cost of re-roofing by covering the surface with Stormtight.

#### **5** Exterior walls

A treatment of Hydrocide Colorless will work wonders in giving you warm, dry buildings.

Hydrocide Colorless is a liquid that is invisible when applied to the exterior of a building. As it contains no paraffin, it will not run in hot weather. It will not detract from the beauty of the walls. It penetrates and fills the surface pores with a waterproofing compound that is permanently resistant to the elements. It will give you permanent damp-insurance. It may be applied with brush or spray.

We shall be glad to send you literature and a free demonstration sample on any of these products.

L. Sonneborn Sons, Inc. 114 Fifth Avenue, New York City

## Awning Type Windows for Schools and Hospitals Excel for Health



Alameda High School, Alameda, California rl Werner, Architect, San Francisco, California

READ THIS ENDORSEMENT OF A RECENT INSTALLATION OF "DONOVAN"-UNIVERSAL WINDOWS BY MR. WM. G. PADEN, SUPERINTENDENT OF SCHOOLS, ALAMEDA, CALIFORNIA.

ALAMEDA CITY SCHOOLS

City Hall. Alameda. Calif. Feb. 18. 1926.

Universal Window Company, 1916 Broadway, Omkland, California

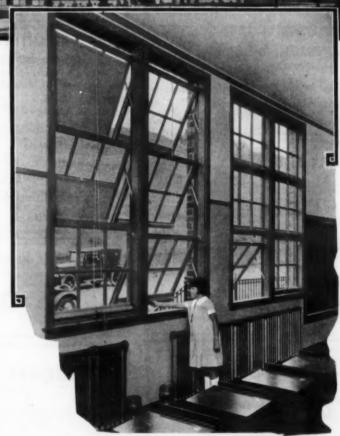
The Universal window has given such complete mattefaction in the Lincoln School that we have stammardised on it for the entire department. At present it is being installed in our new million dollar high school,

I requested Mr. Thomas, our building superintendent, to point out for me all points, for or against the window. He stated there were no points against the window at all and he noted the following in favor of it:

- 1. Ease and simplicity of operation.
  2. Simplicity of mechanism.
  3. Absence of window price in room saved a good many broken windows.
  4. On a warn, sumply day the curtains could be drawn, the windows pushed out, making a perfect awning.
- Personally I feel that the window is superior in every

respect to any window on the market. very sincerely yours

Superintendent of Schools



Lower sash controls operation of all sash.

#### NO WINDOW POLE REQUIRED.

"Donovan" — Universal Windows of the Awning Type in either wood or steel meet the prac-tical, hygienic and architectural requirements of the modern school.

# DONOVAN

**AWNING TYPE** 

#### UNIVERSAL WINDOW COMPANY.

General Sales Office — 1916 Broadway

#### Agents in all principal Cities of the United States

Information about the Truscon Donovan Awning Type Steel Windows may be secured from the Truscon Steel Co., Youngstown, Ohio



#### LUDWIG ABT

Architect

20 years experience in planning of Educational Buildings

Riegel Bldg.

Moberly, Mo.

#### ALSOP & CALLANAN

ARCHITECTS SCHOOL SPECIALISTS

Memphis, Tenn.

Nashville, Tenn.

Jacksonville. Fla.

Registered States of Tennessee and Florida

#### ASHBY, ASHBY & SCHULZE **ARCHITECTS**

Specializing in School Construction Ashby, Ashby & Schulze Building 1511 West Jackson Blvd. Chicago, Illinois

#### BONSACK & PEARCE

WILL MAKE SURVEY OF YOUR NEEDS

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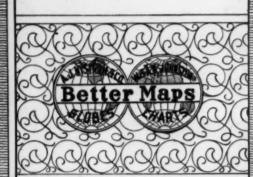
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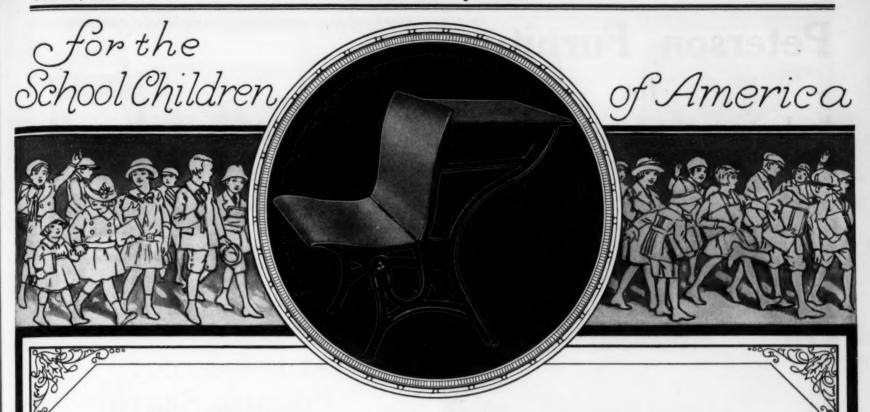
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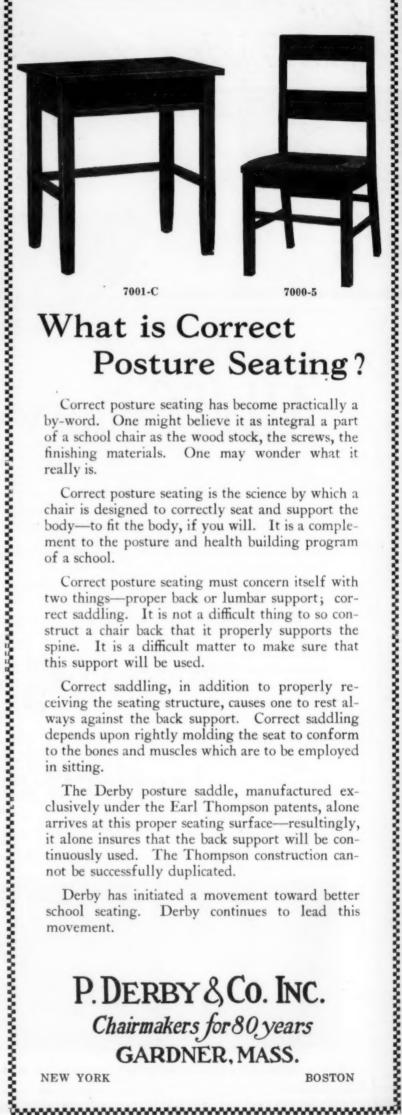
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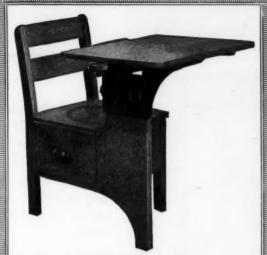
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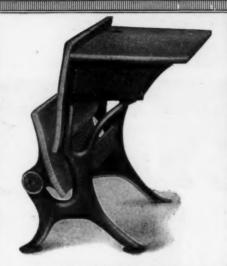
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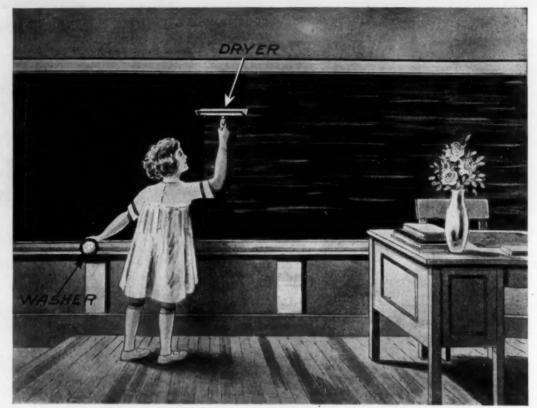
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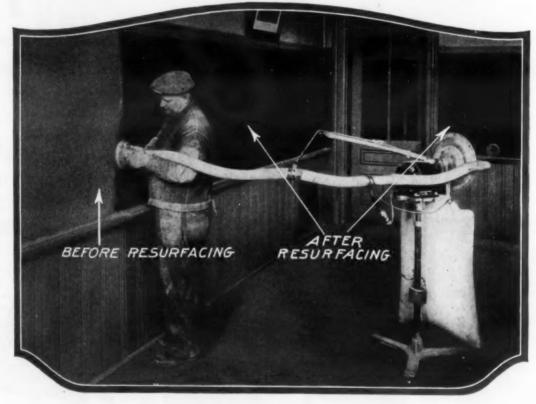
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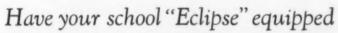
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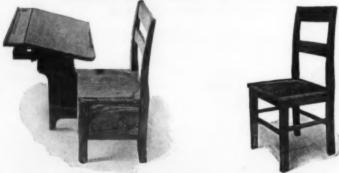
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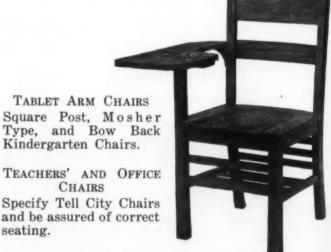
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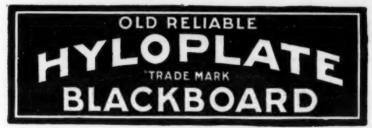
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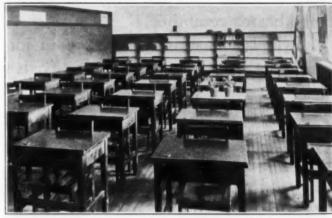
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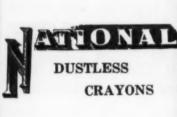
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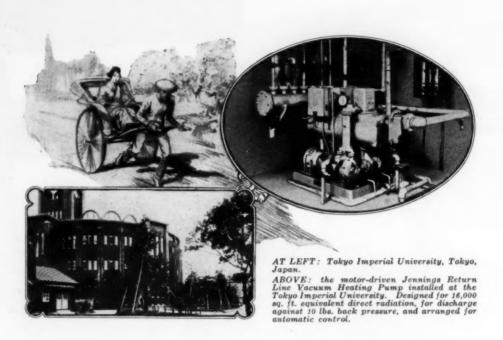
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A Periodical of School Administration

Published on the first day of the month by

#### THE BRUCE PUBLISHING COMPANY

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Eastern Advertising Office: 50 Church St., New York, N. Y.

No. 4

Volume 73 October, 1926 Handling the Complaints of Patrons..... 40 Orville C. Pratt Will E. Wiley The Administration of School Building Programs (Third Article) ...... 49 Osman R. Hull A Filing System for the High School Office...... 50 Rhea M. Wakefield The Salaries of Superintendents of Schools and Mayors in Cities of 100,000 Population Why I Do Not Want to Be a Small Town Superintendent Again...... 52 By One Who Was Walter L. Conway Chas. G. Loring New York Training School for Teachers...... 58 Leo G. Schussman EDITORIALS: ..... 68 What About the Surplus Teachers?.... A Study of Chicago School Finances..... School Administration Notes...... 99 Chicago Correspondence......116 Titles of State School Officers......121 Washington Correspondence.....122 New Standard Type of School Building. . 126 A Usable Lesson Plan Card......140 



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## A STRONG TESTIMONIAL

270

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RAYON HIGH SCHOOL, YOUNGSTOWN, OHIO Charles F. Owsley, Architect, Youngstown, Ohio



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"Makes Every Minute Count"

# Sthool Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume LXXIII, No. 4

OCTOBER, 1926

Subscription, \$3.00 the Year



The Home Must Do Its Part.

## Handling the Complaints of Patrons

Orville C. Pratt, Superintendent of Schools, Spokane, Wash.

No matter how well organized a school system may be, some friction points are sure to develop. The squeak of the school machinery reaches the superintendent in the form of complaints from patrons. Like the squeak in any other form of machine, the friction which finds expression in complaints from patrons must receive prompt attention, or serious trouble is likely to ensue.

Superintendent Should Give Courteous Hearing
First of all, the superintendent should be approachable. Whenever a patron calls at his
office other matters should be put aside at once
and an immediate hearing given. The hearing
should not only be immediate, but it should be
sympathetic. This does not mean that the
superintendent should forthwith, without investigation or evidence, accept the viewpoint and
the version of the complaining patron. It does
mean, however, that such a patron should be
given a courteous hearing, with opportunity to
tell fully how the situation appears to him.
The opportunity to speak freely, to "get it out
of his system," is usually a partial relief to an
irritated patron.

In the second place, the superintendent should make a prompt and full investigation. This investigation should be entered upon with an open mind with the thought, not of upholding the school organization, but of ascertaining the exact truth. It is a foregone conclusion that a patron will not complain unless dissatisfied with the functioning of the schools. His complaint may or may not be justifiable. The only way to find out is by fair and impartial investigation. In any event it is the task of the superintendent to attempt to find out just what the situation is.

In the third place, the superintendent should try to remove the cause of friction by promptly making whatever adjustments may be necessary, and by informing everyone concerned as to what has been done and why. It is not sufficient to listen to a complaint and then to investigate it. Unless a report is made back to the parent concerned, he may naturally suppose that nothing at all has been done, and that patrons are helpless in the matter of getting wrong conditions righted.

Investigation and Follow-up of Complaints A device which the writer has found helpful for insuring the necessary investigation and follow-up of complaints is a "Complaint Box." This box is simply a pasteboard box, 63%" long, 434" tall and 3" deep, intended as a file for cards 6" by 4". In the box is an alphabetical card index.

When a complaint comes in, written notation is made at the time. As soon as practicable thereafter a statement of the case is dictated to a stenographer. This statement is then typewritten on a slip of paper, 6" by 4", and placed in a vertical position in the file, thus indicating that the matter is one needing attention. It continues in this position until the investigation is completed and proper disposition made, including reports to all persons concerned. findings from the investigation and the ultimate disposition of the case are noted in typewriting on the slip of paper. The final notation is that all interested persons have been notified of the action taken. After the case is complete the card is filed horizontally so it no longer appears above the index cards. The remainder of this article is an analysis of the types of complaints made during last school year, together with brief comments for their appropriate handling.

Common Causes of Complaints
One of the commonest causes of complaint is
the inability of pupils to do acceptable school

work because of low intelligence. Take the case of David, for example. He was 13 years old and had been over the 6B work twice. The mother explained it as being due to "just a nervous disposition." The principal said his difficulty was in part due to low intelligence, and in part to his unwillingness to work. On this latter account he had been a source of annoyance since he was in the third grade. Everyone was pleased with the transfer of the boy to a special school for over-age boys.

Rosemary failed to pass from the 1A grade in June. When school started in September ber mother wished her to be placed in the 2B grade because of work she had done at home. The principal said that the girl speaks slowly and thinks slowly, and was an absolute failure in the 1A work. The mother was advised that the school wanted her to advance just as fast as possible, but that it would be necessary to try her out in order to know just where she should be placed to her own best advantage.

#### Mental Deficiency in Pupils

It is seldom that patrons recognize mental deficiency in children. Late in September a woman brought her foster daughter to my office. The girl was undersized and quite evidently mentally defective. She had started to school when it opened, but had paid no attention to the work, would not talk, and interfered to such an extent that it was impossible to keep her. It was advised that the child be placed in the school for mentally deficient pupils, but instead a tutor was employed for her.

#### Lack of Tact in Discipline

Perhaps the second most frequent cause of complaint by patrons arises from fancied or real indiscretions of teachers in disciplinary matters. For example, a mother asked me if the rules of the school permitted a teacher to administer corporal punishment in such a way that the blood was drawn. I told her that this was contrary to the rules. In this case the teacher proved to be at fault, and the mother after being advised, dropped the matter.

A father wrote the school board, asserting that two teachers had attacked his son because he wanted a drink of water. What had occurred was that the boy left the room without permission, "talked back" when spoken to about it, resisted when punished, but was punished in accordance with the rules.

#### Misconduct of Pupils a Source of Complaint

A third fertile source of complaint arises from the misconduct of pupils, especially when parents either believe that the pupils are innocent of wrongdoing, or that the school is magnifying the importance of some trifling mis-



chievous act. As an instance of the former, a boy was seen by a teacher to break down intentionally a young gift tree. The attitude of the parents is that the boy is an "angel child" and cannot tell a lie. The attitude of the teachers is that the boy, because of the parents' mistaken attitude, is "sneaky" and undependable.

Another boy took stink bombs to school and some of them were broken there. The parents thought it too trifling a matter to make "such a fuss" about. The boy was transferred to another school.

Still another boy was troublesome in a disciplinary way and was failing in his work. His mother regarded as a "little thing" the taking of pepper to school to make the children sneeze, and laughed while speaking of it.

## Parent Not in Sympathy With Hygienic Requirements

The hygienic requirements of the schools constitute a fourth source of complaints. A parent got the idea that her child couldn't say a patriotic speech because he wore overalls. The objection was not to the overalls, but to their filthy condition.

Sometimes complaints come from those not in sympathy with medical inspection. Sometimes teachers are not tactful in handling a situation of this kind.

#### Reports of Pupils' Work Brings Complaints

The reports to parents always bring some complaints from patrons. One parent whose boy had received a mark of F in one subject said that this mark was a "slap" at her and that she "would not stand for it." Investigation showed that the boy was doing poor work in this subject and the mother was informed that better work by the boy was the only reasonable way to expect a change in his marks.

Another parent wrote saying that "Neva has taken and passed the 8B and now the teacher has put her in the 8B again." Her concluding sentence was, "I am going to send her Monday and if she is told to take 8B instead of 8A, I will keep her at home until she can go in her proper grade." The records showed that the girl had been in the 8B grade only eight and one-half days. So the concluding sentence of the letter in reply was, "I would not advise you to keep your daughter at home as the attendance officer will be after you in case the girl is not in school, and the final outcome might not be very pleasant, perhaps."

#### Summary

Summarizing, then, the superintendent should be approachable, giving an immediate and sympathetic hearing to every complaint. He should make a prompt, full, and impartial investigation. He should with equal promptness report his findings to everyone concerned with a view to the removal of the causes of misunderstanding and friction. A useful device for assuring proper attention to complaints is a small filing box in which typewritten slips outlining the case are so filed that the lid of the box does not close down until all cases have been completed.

Complaints may largely be grouped by causes, as follows: (1) Low intelligence of pupils; (2) lack of tact by teachers in disciplinary matters; (3) misconduct of pupils, especially when coupled with failure of parents to realize its seriousness; (4) hygienic requirements with which parents are not in sympathy; (5) reports of pupils' work.

Cafeterias are best ventilated by positive exhaust fans.

The city of Oakland plans all the cafeterias in its newer buildings for duplicate use. Particular attention is given to the possibility of using the lunchrooms for visual instruction.

## What Research Has Done for Secondary Education

A. E. Brown, Professor of Education, Iowa State Teachers' College, Cedar Falls, Ia.

One of the main ways in which the human race is enabled to get ahead is in substituting science for guesses to obtain control of the values of life. While education is still a young science, it has many achievements to its credit, and to ignore these findings is to enact a first class imitation of the ostrich in his perspective of world facts from a depth of several inches of sand.

The writer is likely to depart from the limits indicated by the title of this article in two ways. First, he may include certain statistical findings which do not represent investigation of the experimental type, but which tell us nevertheless the facts about certain important situations as they are. Facts of the type indicated by increases in the high school enrollment, increases in high school costs, and the like, are referred to. A second line of variation from the strict implication of the title may take the form of making certain comments and raising certain questions which are not a part of the original studies.

I. The High School Population

The high school population must of necessity have a different mental composition from what it had 30 or 35 years ago. Thorndike has shown that whereas in 1890 seven-tenths of the pupils came from the top fifth of the population, in 1918 only four and one-half tenths of the high school membership came from the same fraction of the population.1 This conclusion is not based on results of actual mental tests since they were not available in 1890. It is based on statistical procedure too complicated to be reproduced here. Thorndike's main prac-tical application of the conclusion is that courses of study, textbooks, and types of instruction need to be adapted to a body of students with a wide range of ability and probably a lower average mental level than in the earlier year. Thorndike is concerned lest a textbook writer think of the high school in the terms of his own high school days when the high school population was probably more highly selected, more homogenous, and with higher average mental level.

If Thorndike's conclusions concerning the changes in high school population are true for 1918 as compared with 1890, they are probably equally true of 1926 as compared with a year such as 1900. In 1900 only .68 per cent of the total population was enrolled in the high school while in 1920 the figure had increased to 1.76 per cent. It must be recognized that while this growth in high school membership is unquestionably a change in the right direction, it makes the curricular and instructional problems different from what they were in the earlier years when the high school clientele was probably more highly selected. Teachers and textbook writers must, therefore, think of the high school as it is now rather than as it may have been when they were students in a high school.

2. A development of intelligence testing has given us tentative standards of mental ability required for different grades of school work. From tests given to large numbers of high school students it is found, with methods, grouping, and curricula as they are at present, that a child needs an IQ of about 95 or higher to get through the elementary grades on time. For high school an IQ of about 100 seems to be necessary, while successful work in college seems to require an IQ of 110. A knowledge of the pupil's IQ and the average mental levels required for different grades of school work assist the administrator and teacher in advising

the child and in the direction of his work. The relationship of intelligence to school persistence is traced in a subsequent paragraph.

3. The factors involved in the elimination from the high school are varied and have been the subject of important studies. According to one of the most careful studies of high school persistence,2 although now somewhat out of date, the girl tends to remain in school longer by one and one-half months than the boy. The reports of the Commissioner of Education<sup>3</sup> and the North Central Association4 verify Van Denburg's conclusions as to the longer stay of the girls. It is true, however, that larger percentages of both boys and girls now reach the third and fourth years than was true in 1910.

The intelligence of the student has a great deal to do with the length of his stay in school. Van Denburg has brought out the fact that students ranked by their teachers as in the lowest tenth of their ability remained only 1.8 semesters as against eight semesters for those adjudged to belong to the top tenth. Feingold<sup>5</sup> has shown that four times as many superior pupils (IQ, 110 or above) graduate from the high as inferior pupils (IQ 94 or less). The pupils of average intelligence tend to persist twice as long as those of inferior ability. In one school6 it was found that the median Alpha score of all who dropped for any cause was 95, while the median for those graduating in the same period was 132.

The pupil's age at completing the eighth grade is a good index of the probable stay of the individual in high school. The younger pupils tend to remain longer. One study7 found that of those entering the high school at twelve years 97.8 per cent graduated. Of those entering at 15.5 years only 1.3 per cent graduated.

Of the social factors known to correlate with stay in school, the number of books in the home has been shown by Holley8 to have a significant correlation. It is clear, of course, that it is not the mere presence of books that favors persistence in school. The more probable explanation is that the same factors that account for a good home library contribute to the continuance of the child in school. Expectation of entering a profession rather than business and expectation of completing the high school course have been shown by Van Denburg to favor a longer stay.

4. The factors which seem to contribute to failure resemble in some respects those which contribute to the elimination from school.

Being over age is likely to be found along with failure. This does not mean that the older pupil is unable by virtue of his age to do the school work as well as the younger pupil, but rather that the older pupil may be old for his classification by virtue of previous failure. O'Brien9 in his study found that 86 per cent of the high school failures were over age. Smith10 found that the tendency to fail varies directly as the age of the pupil on entering the high school. The chances for failure are 1 in 3 for

pupils entering at 12, as opposed to an even chance for those entering at 14, and 2 chances in 3 for those entering at 16.

It is a rather striking fact revealed by O'-Brien's study that the second, third, and fourth years have a larger percentage of pupils making two failures per semester than the first year. A similar fact is brought out in Smith's study. Of those who graduate, the percentages of failure for the four years are: 9.4, 32.2, 41.5, and 168

A question which naturally arises with a failing pupil is the load which he may be allowed to carry the next term or semester. The logic of the situation appears to be that repeaters having failed in carrying a normal load should carry a reduced load the next term. O'Brien's study shows, however, that repeaters who carry a normal or reduced load do not do so well as repeaters who carry an extra schedule. It may conceivably be true that the knowledge on the part of the student that if he fails this term in one subject he may have an opportunity to preserve his classification by taking an extra subject next term, this knowledge may cause him to take his work less seriously than he should. However that may be, the facts seem to be that the repeater with an extra schedule does better than the one with a normal or reduced schedule.

Of the contribution of absence to failure we do not have sufficiently comprehensive studies. From such studies as we do have, it may be concluded that the mark received by the pupil is not materially influenced by absence until it reaches or exceeds two weeks of absence.11

It is a rather striking fact that almost precisely the same percentage of those who accumulate one or more failures eventually graduate as of those who do not accumulate such a record. Another fact which may sound like the point just made but which in reality is different. is that the precentages of graduates and of nongraduates who fail are practically identical.12 Smith, to whose study reference has already been made, gives us figures slightly more favorable to the graduating group. He found that 46.5 per cent of the pupils who graduated failed in one or more subjects, while 56.7 per cent of those who left school before graduation failed in one or more subjects. These facts should not operate to cause the school administrator to relax his efforts to prevent such failures but they should probably cause him to temper his attitude toward failures which do actually

II. Learning Process

- 1. Supervised Study. While there has been voluminous writing about the value of the divided period supervised study plan, there has been very little recent controlled experimentation in this field. The best evidence18 available would seem to advise against expecting too much from the supervised study, at least until the technique has been developed to a point of higher efficiency. Apparently some pupils suffer almost as much from the divided period supervised study plan as others profit from it, One should not be too completely sold to the plan until further experimentation shows its true merits.
- 2. Motivation of Learning. It has been shown by Arps14 that in motor learning it is quite advantageous for the learner to be aware

Van Denburg. "Elimination of Pupils in Public econdary Schools." Teachers College Contribution to Education, No. 47.

"Van Dental Secondary Schools." Teachers Conege Consider Secondary Schools." Education, No. 47.

"Bureau of Education Bulletin, 1923, No. 29.
"Davis, C. O. "Our Secondary Schools." Publication by North Central Association.
"Feingold. "Intelligence and Persistency in High School Attendance." School and Society, Vol. 18, pp.

school Attendance." School and Society, Vol. 18, pp. 
443-450.

"Hamilton. "Some Studies in Intelligence in Sioux City High School." School and Society, Vol. 16. pp. 
416-420.

"Ross. "Relation between Grade School Record and High School Achievement." Teachers' College Contribution to Education, No. 166.

"Holley. "Persistence in School and Home Conditions." Fifteenth Yearbook, National Society for Study of Education, Part II.

"O'Brien. "Study of High School Failures." Teachers' College Contributions to Education, No. 102.

"Smith. "High School Failures and their Causes." Educational Administration and Supervision, Vol. 8, pp. 557-572.

<sup>&</sup>quot;Simpson. Ohio Research Bulletin, Vol. 1, No. 21.

"O'Brien. "Study of High School Failures." Teachers' College Contribution to Education, No. 102.

"Breed. "Measured Results of Supervised Study."
School Review, Vol. 27, pp. 186-204, and 262-284.

"Arps. "Learning with Knowledge of Results va.
Learning without Knowledge of Results." Psychological Review Monographs, Vol. 28, No. 3.

<sup>&#</sup>x27;Thorndike. "Changes in the Quality of Pupils Entering the High School"; School Review, Vol. 30, pp. 357-358

of the results of his work. Arps measured motor reactions by means of the ergograph and found that the individual who is aware of his progress does much better than the individual who is not informed of his progress. To what extent this conclusion is applicable to other types of learning it is impossible to say. It seems to be a general law, however, that the student who knows what the results of his work are even though this knowledge consists only of relative class score in history, will tend to do better than the individual who is in the dark as to the outcome of his efforts. Known results probably influence learning in two ways; they show where shortcomings occur, making economical expenditure of effort possible; they also call into operation the law of effect, causing satisfaction to the learner from acceptable results, and arousing dissatisfaction if results are unacceptable.

Encouragement really does encourage—that is, it produces an increase in quantity or quality of production.<sup>15</sup> The effect of the encouragement is greater upon the slower child than upon the brighter. It is found also that discouraging remarks affect the slower more than they do the brighter. The teacher who does not make use of encouragement discriminately placed is missing an opportunity to procure better production and probably also misses an opportunity to implant some permanent ideals and standards.

The full effect of strong motivation is probably only partially realized at present. Knight's 16 study showed that fatigued men who are candidates for fraternity initiation, physically below par because of noxious medicines which they were forced to take, were able to make as good scores in certain mental tasks as those who were in normal physical condition, because of the strong incentive which was brought into play. The fraternity candidates were led to believe that their initiation depended upon their performance of the tests. The strength of this motivation more than compensated for any reduction in capacity for work due to their previous treatment. If only conditions could be manipulated to give the best motivation all the time it is almost beyond conjecture as to what would happen in the schoolroom. The character and quality of school work turned out would probably stagger

- 3. Visual Education. It is fortunate that we no longer need to depend upon propaganda for our information about the value of visual education. A very careful study of the effectiveness of visual instruction has been made by Dr. Frank N. Freeman. 17 Through a subsidy from the Commonwealth fund, Dr. Freeman has been enabled to subject the different methods of visual presentation to an experimental comparison with other methods of instruction. Thirteen different studies were made under Dr. Free-man's direction. The topics used for study were a mountain glacier, the monarch butterfly, steamboats in the United States history, Yellowstone Park, toads, the mosquito, waste disposal in cities. A few of the main conclusions from the investigation are:
- 1. There is no meaning in the common attempt to contrast language and visual presentation. Neither can displace the other. Each has a distinctive function.
- 2. The effectiveness of motion pictures has undoubtedly been overestimated in comparison with slides, stereographs, pictures and demonstrations.

15 Rissland. Journal of Educational Psychology, Vol. 14.

Vol. 14.

<sup>16</sup>Knight and Remmers, "Fluctuations in Mental Production when Motivation is Main Variable." Journal of Applied Psychology, Sept., 1923.

<sup>17</sup>Freeman. Journal of Educational Research, Vol. 10, pp. 375-385, and Visual Education, University of Chicago Press, Chap. III.



WILLIAM JOHN COOPER, (See Page 110)

- 3. Many motion pictures are overloaded with reading material. Abstract presentation of fact and material that could as well be presented by still pictures or by demonstration.
- 4. In teaching how to make something, demonstration where it can be carried out, is superior to the film. In teaching science demonstration is superior to the motion pictures.
- 5. The peculiar value of the film is in furnishing a peculiar type of experience. child who is greatly interested in the material presented by the film is interested because of the material rather than because of the type of presentation.
- The usefulness of motion pictures would be enhanced if they were organized to confine themselves to their peculiar province. province is exhibition of motion, particularly the facilitation of analysis of motion.
- 7. Caution should be observed to encourage initiative and an intellective active attitude rather than develop an attitude of passive receptivity on the part of the student.
- 4. The Lecture vs. the Question and Answer Method. According to results of a study by Alderman,18 the pupils in grades 7 to 12 are able to learn a little better from the question and answer method than from the lecture method. In grades, 10, 11, and 12, however, better scores were obtained from the use of the lecture plan. It was found by Alderman that individual differences play a part in the results obtained. Those from the highest quartile retained most from the lectures. Those from the lowest quartile retained most from the question and answer plan. Bain in his Doctor's Dissertation, 19 shows first that it makes little difference for immediate recall whether the discussion or lecture plan is used. For delayed recall the discussion seems to be superior to the lecture plan.

#### III. Administrative Problems

1. The Gifted Child. The gifted child can usually be identified with accuracy only through the use of intelligence tests. Since the early testing attempts of Binet, it has been known that the teacher or other observer tends to judge the dull child as brighter than he really is and the bright child as less bright than he really is. In Hughes' study,20 it is brought out that 85 per cent of the superior were underestimated while only 2.3 per cent of the inferior were rated lower than the test showed them to be.

18Alderman. "Lecture vs. Question and Answer Method." School Review, Vol. 30, pp. 205-209.

18Bain. "Lecture vs. Class Discussion Method of Teaching." S. U. I. Thesis, 1925.

29Hughes. "Organized Personal Research." Journal of Educational Research, Vol. 10, p. 390.

It is important to know from authoritative studies that the gifted child is not a physical weakling<sup>21</sup> and that he is not peculiar socially. Some of his physical characteristics may be stated thus: (1) He is less likely than the normal or inferior child to be nervous; (2) he is above the average in respect to health. In general, the danger of over-intellectualization, we are told by Dr. Terman, is usually over-estimated. Some of the mental traits that characterize the gifted child are given by Miss Davis.22 She points out that the gifted child is marked by the power of sustained attention, broad-mindedness and power of self-criticism.

When we raise the question as to just what educational treatment the gifted child should have, it must be admitted that the experimental evidence does not give anything unequivocal. The best opinion seems to be that while we must require certain fundamentals which all children need to learn, the brighter child may be allowed to learn these in less time and then should be permitted to use his extra time in going beyond the obvious implications of the minimum essentials and at the same time enrich his experiences in other fields. In other words probably both speed of progress and enrichment of his course are desirable factors in the administration of the gifted child.

2. Homogenous Grouping. The value of segregating students on the basis of ability has not entirely met the expectation of those interested. Some of the experiments turn out well while others do not. Among the latter might be those of Cook,<sup>23</sup> Moyer,<sup>24</sup> and Burtt,<sup>25</sup> the last on the college level. Some of the reasons for the disappointing results where they do appear are the following: (1) The unreliability of the tests used for sectioning; (2) the fact that intelligence and academic grades do not correlate especially high, and (3) the fact that the instructor may not have made the proper adaptation of material and presentation to the ability of the sections. The advanced thinkers, while retaining faith in sectioning, wish to emphasize the need of suitable methods of instruction. What Dr. Courtis calls "individualized mass instruction" is one plan of realizing the original purpose of ability groupings.

3. High School Costs. The cost of high school education has risen rapidly in the last few years. In 1920 the per pupil cost for United States was \$158.21. In 1910 secondary education absorbed almost 11 per cent of all educational expenditures: in 1920 this figure had increased to almost 21 per cent.<sup>26</sup> In 1910 secondary schools required about 1.7 per cent of the national income (this does not refer to fiscal income); for the same purposes in 1920 about 3.5 per cent of the national income was required.27

When, however, certain relevant facts are taken into consideration, the mounting costs just referred to seem either inevitable or relatively small. While it is true that the ratio of secondary costs to all public school costs has increased from about 11 per cent in 1910 to about 24 per cent in 1920,28 it must be remembered that in the same period the ratio of high school pupils to all public school pupils has increased from about 5.1 per cent to 10.2 per cent.29 The gross increase in the high school

<sup>&</sup>quot;Terman. Genetic Studies of Genius.

"Davis. Twenty-third Year Book, National Society for the Study of Education, Part I, Chap. 7.

"Cook. Twenty-third Year Book, National Society for the Study of Education, Part I, pp. 302-312.

"Moyer. Twenty-third Year Book, National Society for the Study of Education, Part I, pp. 313-322.

"Burtt. "Instruction in Selected and Unselected Sections." Journal of Educational Psychology, Vol. 14, p. 154.

p. 154.

\*\*Report of Committee on Education, Chicago Association of Commerce.

\*\*Computed from above report (No. 1), and from Newcomer's "Financial Statistics in U. S., 1910-20," p. 29, Vol. VI. Report of Educational Finance Inquiry Commission.

\*\*Computed from No. 1.

\*\*Cubberley, Introduction to the Study of Education, p. 436.

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population for the ten-year period under consideration was from 915,000 to about 1,850,000. While high school costs are now a greater charge on the national income than in 1910, it must not be overlooked that the total governmental costs as compared with national ability to pay has also increased; the increase being from 9 per cent in 1910 to 14 per cent in 1920. About ten times as much is spent by the nation for insurance as is spent for high school education.

4. The Effect of Class Size. Ever since the North Central Association took action on the size of classes, there has been a strong tendency on the part of teachers, superintendents, and principals to keep classes down to the approved membership. This has been 25 pupils per class, with a maximum of 30. It is apparent that it is easier work to teach the smaller class. But that a better job can be done with the smaller group does not appear to be warranted by the results of experimentation.

The matter was studied by C. O. Davis<sup>30</sup> in two ways. The first was a statistical study of the marks turned in at the principal's office. This revealed the fact that about the same percentages of marks of different level were given the small classes (under 20), the medium sized class (20 to 30), and the large classes (over 30). Then Mr. Davis made an experimental attack on the problem. Classes were made up of different sizes and were taught as nearly as possible in the same way. When the marks were distributed for the classes of different sizes, again there appears almost no difference in the proportion of high, middle and low grades for the classes of different sizes.

A similar study was made in Illinois31 and it gives similar results. This study shows that even in cases where the small class is only about onehalf as large as the larger one, the differences in the term grades and examination marks were insignificant.

5. Subject Combinations in the High School Teacher's Schedule. Kirby32 has studied the combination of subjects which are found in the class schedules of the high school teachers of While there is no earlier study with which this one is comparable, it appears that there is a growing tendency to allow the teacher to limit her teaching to a single department. In this study it was brought out that the following percentages taught subjects in a single department. Following the percentage as given is the subject which is most frequently combined with the major subject. If this present practice were recognized both by teacher training institutions and by school boards, there might result a better matching of professional preparation against the actual teaching jobs to be occupied. English Studies 52% Social Studies

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Mathmatics	57%	Science
Science	57%	Mathematics
Commercial	87%	Scattered
Home Economics	41 %	Science and Soc Studies
Manual Arts Music	32 % 77 %	Scattered
Latin	34 %	English and

6. Objective Examinations. For a number of years it has been recognized that the older type of essay examination is inadequate as a basis of determining marks. A newer type of examination has appeared during the last four or five years, a type which appears to be a great improvement over the older type. In order that we may make clear at the outset the difference between the two types, we may characterize the

<sup>26</sup>Davis. School Review, Vol. 31, pp. 412-429.

Bulletin 10, University of Illinois. Bureau of Educational Research.

EKirby. University of Iowa Extension Bulletin No. 136. "Subject Combinations in the High School."

old examination as requiring relatively long explanatory written answers to a small number of "how" questions. Whereas, the new type examination requires exceedingly short answers to a relatively large number of "key" questions, correct answers being symptomatic of the total organized knowledge.33

Two types of errors appear to be prominent in the old type of written examination. The first of these is due to inadequate sampling. This type of error arises from the fact that not enough items are covered in the test, at least the items are not drawn in such a way as to represent a good sampling. In the usual type of essay examination covering a period of 40 minutes, only a few major questions can be covered. This plan of selecting questions does not dip into the subject matter at enough points to give a good sampling of the pupil's command of the subject. A pupil may chance to be well prepared on all of the four questions which represent only a limited sampling. Another student

#### WHEN THE LITTLE ONES COME HOME FROM SCHOOL

Rose Toothaker Milliken

There's Robert and Richard and Ronald. There's Robert and Richard and Ros
Helen and Baby Jule,
Sturdy, rosy-cheeked youngsters,
Hurrying home from school,
Making a dash for the pantry,
And mother's well-filled cooky jar
Oh, happy moments of childhood
With paver a work to mark Oh, happy moments of With never a worry to mar!

'Tis true that the porch is bespattered
With footprints of mud from the lane,
'Tis true that my spick and span kitchen
Will soon be in chaos again;
But how can I punish my children
When I long ago made it a rule
To greet them with kisses and laughter
When they eagerly come home from school?

And if I feel tired and discouraged, I have but to glance cross the way,
At the big, stately house of my neighbor,
Kept spotlessly clean every day;
There's no one to soil or to clutter,
To disarrange even a stool,
But no little footsteps come running
To stop at the gate after school.

And oh, how I pity my neighbor!

And oh, how she must envy me!

For what is the wealth she possesses

Compared with the gifts God gave me?

I spend weary hours in my kitchen,

While she, on her porch, looks so cool;

But I'd not change with her for a million

When the little ones come home from a When the little ones come home from school. 

of equal calibre might be unfortunate on two of the four questions and hence draw a poor mark.

The other main difficulty in the essay examination is the lack of objectivity. The individual who marks the paper is unable to mark the same paper in the same way at two different times, and two different markers would vary widely in the marks assigned. Stoddard34 reports the results of correlating the marks of one scorer against another scorer on sixteen different subjects on a state diploma examination. A correlation of the marks of scorer 1 against scorer 2 in 1923 was .69. Their mark for the following year on a similar examination gave a correlation of .56. The average for the two years was thus .62. Ruch<sup>35</sup> reports the fact that an American history paper which was assigned a mark of 67 by one teacher was scored by 115 other teachers whose scores range from 25 to 85 with an average of 56.6. The standard deviation of the score was 12.3, which means that one-third of the scores were outside of the limits from 44.3 to 68.9. These results are typi-

Paterson, Preparation and Use of New Type Examinations.
 World Book Co.
 Stoddard. Address at the University of Iowa Conference on Supervision, 1925.
 Ruch. Improvement of the Written Examination,

cal of the results found in all studies. essay type of examination is so subjective that it can hardly be marked in such a way as to give a reliable score.

A few of the main types of objective examinations may be mentioned and illustrated.

1. Simple Recall.

Snowbound was written by --

Completion Statements.

The mouth is concerned with digestion in two ways: First, the grinding action of the \_\_\_\_\_\_, and, second, the chemical action of the enzyme \_\_\_\_\_\_\_, which - changing them into acts on -

3. Multiple Choice.

The best room temperature is about: 60°; 68°; 75°; 88°; 98°.

4. True-False Statements.

Dickens was a writer of lyric poetry.

Best Answer.

The potato is botanically to be considered as:

an underground stem; a root adapted for storage; a taproot.

6. Matchings.
George Washington—Advocate of free silver. Harvey W. Wiley—First President of

United States.
Thomas Jefferson — Confederate Com-

mander.
Robert E. Lee—Louisiana Purchase.
William J. Bryan—Pure Food Laws.

7. Identification.

A number of breakfast menus are shown and the student is to select the one which according to principles already studied, best suits a 12-year-old child.

8. Analogies.

In questions of this type, a relationship is shown in one pair of words which is to be carried over into another pair, one of which is missing. Calorie : Heat :: (Erg) : work.

9. Misfitting term.

In this type several words belonging to one category are listed, along with one word which does not belong there. The misfitting word is to be picked out.

Mars, Mercury, Jupiter, Saturn, Galileo. As to which of these different types is the best, it is rather difficult to say. The true and false is more economical of time but it is not quite so reliable as some of the others. The two response of the multiple choice or best answer questions is next best in point of the economy of time and ranks high also in point of re-

As to whether or not the answers should be corrected for chance, we do not appear as yet to have the final answer. Stoddard's recommendation is that the students be advised not to guess and that the gross score instead of the corrected score be accepted. Studies now under way by Woods of Teachers College and by Charles of Iowa State Teachers' College, bear on this problem.

#### IV. Conclusion

This review of research makes no pretense of completeness. Some known studies were omitted because they could hardly be brought within the scope and plan of this article. Doubtless many other meritorious studies were omitted because of their being unknown to the writer. In fact, one leaves the consideration of the subject with the feeling that some agency should be invented or perfected for summarizing experimental studies in this field, and for making them promptly available to classroom teacher and administrator. Another feeling which grows out of the contemplation of the subject is that, with all due respect to the achieved results, the possibilities of useful research in the secondary field have been merely tapped.

### New School Business Methods in Newton

A. J. Peel, Accountant, Boston, Mass.

The Newton (Massachusetts) School Department has long been considered as being in the front rank of progressive school systems, both from the viewpoint of education policy and business management. In 1912 the department issued a magnum opus of school cost statistics that was probably the most complete and unique thing of its kind ever put out by a school department. This monumental work was not repeated, for the simple reason that to produce detailed statistics of costs such as were featured in the Newton Year-Book of 1912, would have necessitated a serious drain on administrative funds. This report was, however, a demonstration of what, as an ideal, should be possible to any large school system. Moreover, the developments which have taken place in modern accounting methods, especially along the line of cost-finding, have made possible the collection and accumulation of cost factors, which accurately reflect unit costs, in a degree, which a decade ago, was considered impossible as practical routine.

Now the Newton schools are providing us with an example of what can be accomplished along the line of economical operating, by bringing in a man as assistant to the superintendent, whose entire experience has been of a very practical nature, and whose knowledge is of buying and selling, getting things done quickly and economically, thoroughly and scientifically. Mr. George Keller, assistant to the superintendent and secretary of the Newton school committee, is primarily a construction engineer, and a little over twelve months ago he was in the building department of the city of Newton. On his appointment to the school department he tackled his duties as business manager with the same scientific forethought that would be necessary in the erection of a big school building. By training and experience, he realizes the importance of what many would consider small details; but it is just in "small details" that he has already saved the Newton school department many thousands of dollars in operating expenditures, and has released just so much for additional and improved equipment. As an example of what may be accomplished along this line, two or three specific cases may be cited: When Mr. Keller got "on the job" he discovered that window cleaning was an operation that took something like four days, in a school. This seemed to him too long, and after finding out exactly what the janitorial force was using for this purpose-it happened to be a widely advertised household preparation-he substituted denatured alcohol. Now the windows are cleaned in less than half the time

#### Some Economies Effected

Before Mr. Keller's advent to the school department, the city of Newton building department paid out approximately \$1,200 a year for repairs due to freeze-ups; last year (1925) only \$12 was paid out on this account. How was this very significant reduction of expense effected? By taking the trouble and the time to circularize every janitor on the subject, furnishing him with technical instruction and general constructive advice on the subject of plumbing. In addition to these very frequent circulars to the janitorial force, Mr. Keller meets his janitors every week, and talks to them on some special and particular phase of their work; listens to their difficulties and prescribes a remedy wherever possible. Yet another step has he taken towards the goal of evolving thoroughly efficient and scientific ianitorial service: the Massachusetts University Extension Department provides special courses in heating, lighting, and janitorial duties, and Mr. Keller is recommending some of his men to take this course; and he is taking it with them, so that when they run into a difficulty he will know what it is, and will be prepared with the answer. In one year in which special attention has been given to the subject of heating costs, and engineers and firemen have been helped by constructive advice and suggestions from the superintendent's office, through Mr. Keller, a saving of about \$7,000 has been effected in the cost of fuel.

The danger of an accumulation of old equipment, supplies and material, exists more or less in every school, and unless this possibility is kept in mind, the danger materializes into concrete fact. In Newton there is no problem as to how to keep the janitorial force occupied during vacation periods; every school during the summer vacation is thoroughly overhauled janitorially, and all accumulations of equipment and rubbish are examined or destroyed. For example, one of Mr. Keller's first moves after his appointment was to investigate the attics and cellars of schools; the result was astonishing; he unearthed over four hundred pieces of equipment, such as desks, chairs, etc. Much of this looked as if it were useless, but the new assistant superintendent knew that a wonderful transformation can usually be made by the expenditure of a dollar or two. Small repairs, a coat of varnish or stain, and practically every piece of furniture discovered in the cellars and attics went into commission.

#### **Purchasing Supplies**

The problem of consumable supplies is now being attacked in the same way. Newton has no general store system; all supplies are delivered to the school in which they are to be used. While there is an efficient control of purchasing, and a proper check of all deliveries, there is still a lack of scientific control in the school buildings, and it is this feature which is now receiving very careful study. The matter of a central store is under consideration; the problem being, of course, as to whether the saving which would be effected by large quantity purchases, will be more than offset by the additional cost of stores supervision, handling and reshipping, and contractual or departmentally operated transportation, of supplies from stores to schools.

In the purchasing and appropriation accounting routine, there are one or two features that are of particular interest, and so far as I know, unusual. Mr. Keller, though a strong believer in scientific control along every avenue, has no use for red tape methods. His purchasing system is thoroughly adequate. but exceedingly simple.

FOR THOSE WHO DESIRE EDUCATION

An education is normally, and we believe rightfully, conceived to be for those who can learn and who desire to learn. Such a function is in the highest degree selective. What has brought it to pass that our schools and colleges today are literally overwhelmed with persons who neither can learn nor desire to learn? As attendance has relatively increased, the average of ability has sensibly diminished, and the will to learn has weakened still faster. Intellectual competition has gone. Released from its genuine demands, an abounding student energy has raised a crop of general activities that have not only subordinated the main task but to a very great extent, both in public and in student opinion, have assumed the crown of sanction for the whole process. We bewail the fact and seek to "regulate" student activities without perceiving that, if what we still believe to be the major operation were cunningly carried out, the others would of themselves fall into the proper perspective.—Henry R. Pritchett, President, Carnegie Foundation.

On receipt of a requisition from a principal or other authorized official, it is examined by him, and if, in his opinion, it is a justifiable issue or purchase, a purchase order is issued. approved by the superintendent, after which the original copy is sent to the vendor, the duplicate retained in Mr. Keller's office, and the triplicate returned to the requisitioning officer. On receipt of the goods, the third copy is used as a receiving certificate by the receiving officer in the school to which the material is delivered, and is returned to the purchasing agent's office. The scientific triangular control is now complete-a copy of the original purchase order to check the bill by; the bill of charges from the vendor; and the certificate of receipt of goods ordered, from the receiving officer. Up to this point this is standard routine, and is found in every well organized school department office.

#### Accounting for Supplies

As each school operates on an appropriation which is budgeted in accordance with school purposes, it is necessary that the amount allotted for supplies, textbooks, and equipment, shall be charged immediately the order for additional purchases is passed. Most school superintendents will admit that in theory, but the majority think that it is not practicable without an amount of accounting routine which is impossible in the office without increased clerical help. In the Newton office a very satisfactory and simple method has been worked out, by which the amount of accrued expenditure for supplies, material and equipment for any school may be instantly known, including the last order issued for that school. In order to achieve this result, every order issued is valued; in most instances, of course, the cost of the goods ordered is known to a penny; in other cases it must be estimated; but whether known or estimated, the appropriation is charged. Now comes the matter of adjustment when the actual bill is received; if the charge is less than the estimated charge, an entry is made in red ink for the amount of the difference; if the amount billed is in excess of the original charge for that item when estimated, an additional charge is put through the books for the difference.

By this means the appropriation is always burdened for the amount of obligations. Of course, there is always a small difference one way or the other, but in actual practice it is usually on the safe side—that is, the danger of over-spending does not exist. The work entailed in keeping this record is very light, yet it furnishes a perfect memorandum control. It must be understood that this record is no part of the general bookkeeping, but is solely for the purpose of enabling the purchasing agent to know just what he is authorized to spend for each school, and the available balance after an order has been authorized.

#### New York City Children Lead in Daily Attendance

New York City prides itself in leading the rest of the country in average daily attendance in day school activities with an average of 917,-117 pupils, doubling the average of its closest rival, Chicago, of 409,936, figures furnished by the statistical report of the board of education indicate.

Philadelphia, following Chicago, is rated third with 228,201, but this is less than one-fourth the daily average attendance of New York children.

The combined daily average of the four cities following New York is a little more than 4,000 over that of the metropolis, illustrating the prodigious school system of New York City. Totaling the averages of Chicago, Philadelphia, Detroit, Newark, and Los Angeles, it is found that the remaining thirteen cities, excluding New York, have an aggregate daily attendance of 989,471, or a trifle over 2,000 more than the combined total of the five cities mentioned, or some sixty odd thousands more than New York City alone.

## The Recent Trend of Current Expenditures for Schools

T. E. Vaughan, Superintendent, Wellsville, Mo.

The rapid increase of school costs in recent years has attracted a great deal of attention, and has been the subject of much comment that can not be ignored by those who are in any way responsible for school expenditures. Doubt has been expressed as to the ability of this country to continue its present program of popular education, and the declaration has been made that school costs have already reached the limit of safety. Such comment calls for a thorough investigation of every phase of school finance, for the purpose of determining the exact nature of the increase referred to, the causes back of it, and its significance in relation to the future of public education in this country. It follows that every effort directed towards any of these ends is worthy of consideration, however meager its contribution may be. That view of the matter is responsible for this report of a recent investigation of current expenditures for schools in 28 representative cities of the Middle-West.

#### The Cities Studied

The period covered by the investigation is from 1910 to 1923. The cities selected are all those in the North-Central group of states that maintained throughout the period a population of more than 30,000 and less than 100,000, except two cities in Kentucky and four in Wis-These were excluded for the reason that their methods of financing schools rendered impossible, by means of the data at hand, the separation of current expenditures for schools from current expenditures for other objects of municipal government. The list of cities embraces six in Illinois-Decatur, East St. Louis, Joliet, Quincy, Rockford, and Springfield; four in Indiana-Evansville, Fort Wayne, South Bend and Terre Haute: four in Iowa-Cedar Rapids, Davenport, Dubuque, and Sioux City; two in Kansas-Topeka and Wichita; five in Michigan—Bay City, Jackson, Kalamazoo, Lansing, and Saginaw; two in Missouri—St. Joseph and Springfield; one in Nebraska-Lincoln; and four in Ohio-Canton, Hamilton, Lima, and Springfield.

Most of the material used in the study was taken from the series of annual reports of the Bureau of the Census, entitled "Financial Statistics of Cities Having a Population of Over This publication was not issued, however, for either the year 1914 or the year 1920, and the 1921 volume lacks complete figures for ten of the cities included in the study. Moreover, figures for average daily school attendance are not given in any of the volumes after the one for the year 1912. Finally, the 1922 volume does not give figures showing the basis of assessment of property. In an effort to fill in some of the gaps resulting from these deficiencies, recourse was had to the publications of the United States Bureau of Education. In a few instances, where data could not be obtained from either of the sources mentioned, estimates were used. Where a resort to estimates seemed unwise, the gaps resulting from the lack of data were left unfilled.

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All averages shown are true averages, found by dividing totals by totals. For example, the per capita current expenditure for schools was found by dividing the total expenditure for the 28 cities by the total population of the 28 cities. All other averages were found in a similar manner.

#### Scope of the Study

The term current expenditures is used to include all payments for things that serve temporary needs, such as the services of employees, supplies of all kinds, and ordinary repairs. It does not include payments for things of a last-

ing character, such as land, buildings, and permanent equipment. Nor does it include payments either for the liquidation of bonded debts or for the meeting of interest on such debts.

Total current expenditures for schools in the 28 cities grew from \$5,083,241 in 1910 to \$21,-353,011 in 1923. The increase was 320 per cent. The total population of the 28 cities grew from 1,279,016 in 1910 to 1,734,275 in 1923. The increase was 35.59 per cent. If the per cent of increase in current expenditures is divided by the per cent of increase in population, the quotient is 9. It thus appears that from 1910 to 1923 the rate of increase in current expenditures for schools in these cities was nine times the rate of increase in population.

The total average daily school attendance in the 28 cities in 1910 was 151,499. Figures showing the average daily school attendance in 1923 were not available for this study. The total average daily attendance in 1922 was 243,316. The increase during the twelve years was 60.6 per cent. The increase in current school expenditures during the same twelve years was 300 per cent. If the per cent of increase in current school expenditures is divided by the per cent of increase in average daily school attendance, the quotient is 4.95. The rate of increase in current school expenditures from 1910 to 1922 was 4.95 times the rate of increase in average daily school attendance.

The total assessed valuation of property in the 28 cities in 1910 was \$584,066,664. In 1923, it was \$1,927,558,118. The increase was 230 per cent during the thirteen years. If the per cent of increase in current school expenditures is divided by the per cent of increase in the assessed valuation of property, the quotient is 1.39. In 1910 the total estimated true valuation of property in the 28 cities was \$1,105,248,796. In 1923 it was \$2,635,285,736. The increase during the thirteen years was 138.43 per cent. If the per cent of increase in current school expenditures during the thirteen years is divided by the per cent of increase in the estimated true valuation of property, the quotient is 2.31. It follows that the rate of increase in current expenditures for schools in these cities from 1910 to 1923 was 1.39 times the rate of increase in the assessed valuation of property, and 2.31 times the rate of increase in the estimated true valuation of property.

#### Population vs. School Costs

Table 1 shows the 4rend of population, of average daily school attendance, of current expenditures for schools, of the assessed valuation of property, and of the estimated true valuation of property from 1910 to 1923, by exhibiting in index form, with 1910 as the basic year, each item for all the years for which complete figures were available.

TABLE 1
The Increase of Population, of Average Daily School
Attendance, of Current Expenditures for Schools,
of the Assessed Valuation of Property, and of
the Estimated True Valuation of Property
in Twenty-eight Cities

		in Twen	ty-eight (	ities	
		Average	Current	Assessed Val-	Estimated True
		Daily	Expendi-	uation	Valuation
	Popula		tures for	of	of
Year		Attendance	Schools	Property	Property
1910	100	100	100	100	100
1911	103	103	108	125	115
1912	106	107	115	128	117
1913	108	110	121	133	118
1915	111	120	136	150	128
1916	114	124	152	156	142
1917	116		161	162	151
1918	119	130	177	173	161
1919	122		201	184	171
1920	127	142	282		
1922	133	161	400	325	224
1923	136		420	330	238

Per capita current expenditures for schools in the 28 cities included in this study rose from \$3.97 in 1910 to \$12.31 in 1923. The increase during the thirteen years was 210 per cent of the expenditures in 1910. The per capita estimated true valuation of property during the same period rose from \$864.14 to \$1,519.53. The increase during the thirteen years was 75.8 per cent of the 1910 figures. If the per cent of increase in per capita current expenditures for schools is divided by the per cent of increase in the per capita estimated true valuation of property, the quotient is 2.77. From 1910 to 1923, average per capita expenditures for schools in these cities increased 2.77 times as fast as average per capita estimated true valuation of property.

Current expenditures for schools per pupil in average daily attendance in these cities rose from \$33.55 in 1910 to \$83.60 in 1922. The increase during the twelve years was 149 per cent. During the same twelve years the estimated true valuation of property per pupil in average daily attendance rose from \$7,295.48 to \$10,-168.91. The increase was 39.4 per cent. If the per cent of increase in current expenditures per pupil in average daily attendance is divided by the per cent of increase in the estimated true valuation of property behind each pupil, the quotient is 3.78. It thus appears that the rate of increase in current expenditures per pupil in average daily attendance from 1910 to 1922 was 3.78 times the rate of increase in the estimated true valuation of taxable wealth behind each pupil in average daily attendance.

#### School Costs vs. Property Valuations

Table 2 shows in index form, for the entire group of cities, per capita current expenditures for schools, expenditures per pupil in average daily attendance, the per capita estimated true valuation of property, and the estimated true valuation of property per pupil in average daily attendance, together with an index of retail prices, for all the years from 1910 to 1923 for which figures were available.

TABLE 2
Per Capita Current Expenditures for Schools, Current Expenditures Per Pupil in Average Daily Attendance, the Per Capita Estimated True Valuation of Property, the Estimated True Valuation of Property Per Pupil in Average Daily
Attendance, and Retail Prices

		Attendance	e, and Reta	il Prices	
	Current	Expenditu	res Estimate	ed True	
	for	Schools	Valuation of	f Property	
	Per	Per	Per	Per	Retail
Year			Capita	Pupil	Prices
1910		100	100	100	100
1911	105	105	111	112	100
1912		107	110	109	102
1913		110	109	107	103
1915		113	115	106	107
1916		122	125	114	111
1917			130		124
1918		133	136	124	148
1919			140		178
1920		199			207
1921			161		205
1922		249	169	139	178
1923	310		176		***

aThe 1921 figures are for eighteen cities only

Figures showing the price level for 1923, as measured from 1910, were not at hand. Those given for the other years were taken from one of the publications of the Educational Finance Inquiry.<sup>1</sup>

If account is taken of the change in the value of the dollar during the period covered by this investigation, and if that change is measured in terms of the index of retail prices given in Table 2, current expenditures for schools in these cities, both per capita and per pupil in average daily attendance, show a much smaller increase than the discussion so far would seem to indicate; while the ability of the cities to meet such expenditures, under present methods of taxation, shows no increase at all. If current expenditures for schools in 1910 and 1922 are expressed in dollars of the same purchasing power, in accordance with the index of retail prices, per capita expenditures show an increase of 70 per cent, and per pupil expenditures an increase of 40 per cent during the twelve years.

<sup>1</sup>The Financing of Education in Iowa, page 19.

If the estimated true valuation of property for the same two years is expressed in the same way, the per capita amount shows a decrease of approximately five per cent, and the amount per pupil in average daily attendance a decrease of 22 per cent during the twelve years.

#### School Costs vs. Municipal Costs

Current expenditures for schools in these cities during the period covered by this investigation increased more rapidly than the total current expenditures of the cities for all objects of municipal government, and more rapidly than current expenditures for any other specified object, except recreation. The extent to which this is true may be seen by referring to Table 3, which shows per capita expenditures for each of the several objects of municipal government in 1910 and in 1923, and the per cent of increase in the expenditures for each object from 1910 to 1923.

TABLE 3 Per Capita Expenditures for the Several Objects of Municipal Government, and the Per Cent of Increase of Each, 1916 and 1923

Increase of				
		Per Capita Expenditures		
	1910	1923	Increase	
General Government	\$ .790	\$1.295	63.8%	
Protection to Person				
and Property	2.170	4.402	103.0%	
Health and Sanitation	.723	1.303	80.2%	
Highways	1.056	1.831	73.4%	
Charities. Hospitals.				
and Corrections	.143	.383	167.7%	
Schools	3.974	12.312	209.8%	
Libraries	.187	.430	130.1%	
Recreation	.234	.759	223.8%	
Miscellaneous and				
General	.145	.433	197.8%	
All Departments	\$9.424	\$23.148	145.6%	

On per capita basis, the rate of increase in current expenditures for schools was more than twice the rate of increase in current expenditures for protection to person and property, more than two and one-half times the rate of increase in current expenditures for health and sanitation, and more than 2.8 times the rate of increase in current expenditures for highwavs.

#### Distribution of Municipal Expenditures

A clearer notion of the relative amounts devoted to the several objects of municipal government will be obtained by referring to Table 4, which shows a per cent distribution of the money used to defray all current expenses.

TABLE 4 Per Cent Distribution of the Money Used to Meet the Current Expenses of the Several Departments of

Municipal Government, 1910 and 1923	1923
General Government 8.386%	5.595%
Protection to Person and Property 23.027%	19.015%
Health and Sanitation 7.674%	5.631%
Highways 11.208%	7.912%
Charities, Hospitals, and Correc-	
tions 1.516%	1.652%
Schools 42.174%	53.188%
Libraries 1.987%	1.861%
Recreation 2.486%	3.277%
Miscellaneous and General 1.542%	1.869%
Total100.000%	100.000%

As regards the increase of current expenditures for schools, the degree of variation among the several cities of the group is highly signifi-Per capita current expenditures for schools in South Bend, Indiana, increased 392 per cent between 1910 and 1923, while similar expenditures in Hamilton, Ohio, increased only 81 per cent. South Bend gave nearly five times as much per capita towards defraying current expenditures for schools in 1923 as in 1910, while Hamilton gave considerably less than twice as much. Current expenditures per pupil in average daily attendance in Terre Haute, Indiana, increased approximately 238 per cent from 1910 to 1922, while similar expenditures in St. Joseph, Missouri, increased approximately 69 per cent during the same period. The part of the total current expenditures for all purposes which Wichita, Kansas, devoted to schools increased from 36.7 per cent in 1910 to 57.2 per cent in 1923, while the part devoted to schools in Hamilton, Ohio, increased only from 47.2 per cent to 47.6 per cent during the

TABLE 5
Variation in Per Capita Expenditures for Schools in Twenty-eight Cities

			-		Mean
Year	Average	Maximum	Minimum	Range	Deviation
1910	\$ 3.97	\$ 5.19	\$ 2.78	\$ 2.41	\$ .52
1911	4.17	5.47	3.10	2.37	.57
1912	4.31	5.66	-3.24	2.42	.56
1913	4.44	6.91	3.21	3.70	.79
1915	4.88	7.22	3.45	3.77	.69
1916	5.34	8.57	3.76	4.81	.92
1917	5.51	8.87	3.54	5.33	.94
1918	5.91	9.30	4.17	5.13	.86
1919	6.54	9.27	4.64	4.63	1.09
1921a	9.86	14.01	7.09	6.92	1.18
1922	11.97	18.29	8.41	9.88	2.11
1923	12.31	18.01	8.12	9.89	2.11

\*Eighteen cities only.

Probably more significant than the facts just mentioned is the degree of variation among the several cities in the amounts expended for schools, per capita and per pupil in average daily attendance. Table 5 and Table 6 are designed to show this variation as regards per capita expenditures and expenditures per pupil in average daily attendance, respectively. Each table shows the average amount expended by the entire group of cities, the amount expended by the city that spent the most, the amount expended by the city that spent the least, the range between the maximum and the minimum expenditure, and the mean, or average, deviation of the expenditures of the individual cities from the average for the entire group.

TABLE 6
Variation in the Per Pupil Current Expenditures for

	Sen	oois in Iw	oney-eight	CILLOS	Mean
Year	Average	Maximum	Minimum .	Range	Deviation
1910	\$33.55	\$41.00	\$18.95	\$22.95	\$ 4.44
1911	35.37	42.93	21.10	21.83	4.33
1912	35.85	45.02	22.35	22.67	4.13
1913	36.84	50.81	22.75	28.06	4.73
1915	38.02	55.29	27.84	27.45	5.08
1916	41.29	62.94	26.57	36.37	6.66
1918	45.67	57.38	32.68	24.70	6.18
1920	66.93	116.22	43.13	73.09	12.46
1000	93.60	117.04	59.78	64 28	12.83

These tables show that the degree of variation among the several cities in both per capita current expenditures for schools and current expenditures per pupil in average daily attendance was greater at the end of the period covered by the investigation than at the beginning. The average deviation from the average of per capita expenditures was 13.1 per cent of the average in 1910, and 17.1 per cent of the average in 1923. The average deviation from the average of per pupil expenditures was 12 per cent of the average in 1910, and 15.3 per cent of the average in 1922. The difference between the highest and the lowest city in the matter of per capita current expenditures for schools was 60.7 per cent of the average in 1910, and 80.3 per cent of the average in 1923. In the matter of current expenditures per pupil in average daily attendance, the difference between the highest and the lowest city in 1910 was 65.7 per cent of the average, and in 1922 the difference was 76.9 per cent of the average.

In Conclusion
Absolute reliability is not claimed for the figures here presented. There is a possibility of inaccuracy due to erroneous estimates, where estimates are used. Cities may differ from one another as regards the items included under the head of current expenditures. The fact that figures for average daily attendance include attendance in both elementary schools and high schools may affect the comparability of the cities to some extent. The fact that the boundary lines of cities and their school districts do not always coincide makes the figures showing per capita expenditures somewhat inaccurate in the case of some of the cities. Never-

#### UNCERTAINTIES OF EDUCATION

UNCERTAINTIES OF EDUCATION

No one can look at a young child and predict
its future with the accuracy of the botanist who
looks at the seed and forthwith tells the size,
shape, color of the flower, and flavor of the fruit
months hence. The zoologist examines an egg
and outlines the life history of the animal it will
produce. Psychologists and doctors have not
yet learned to preview the future of the human
infant with any such precision; they are far from
being able to tell a Lincoln, a Burbank, a Whitman, an Edison at birth. an Edison at birth.

theless, when allowance is made for all of these factors, the variation among the several cities is too great to be ignored. There is certainly need for investigation to determine the causes back of the differences. If there is any good reason why schools should cost twice as much in one city as in another, when the two are seemingly comparable as regards both size and location, we should certainly know what that reason is.

In this report an effort has been made to show as truthfully and as clearly as possible the nature of the increase of current expenditures for schools in 28 representative cities of the Middle-West between the years 1910 and 1923. No attempt has been made either to account for the increase or to draw conclusions from it. That task is left to the reader and to those who care to pursue the investigation farther. It seems sufficient here to summarize briefly the findings that have been set forth:

1. From 1910 to 1923, the rate of increase in current expenditures for schools in these cities was nine times the rate of increase in population.

2. From 1910 to 1922, the rate of increase in current expenditures for schools was almost five times the rate of increase in average daily school attendance.

3. From 1910 to 1923, the rate of increase in current expenditures for schools was 1.39 times the rate of increase in the assessed valuation of property, and 2.31 times the rate of increase in the estimated true valuation of property.

4. From 1910 to 1923, per capita current expenditures for schools in these cities increased 2.77 times as fast as the per capita estimated true valuation of property.

5. From 1910 to 1922, the rate of increase in current expenditures per pupil in average daily attendance was 3.78 times the rate of increase in the amount of the estimated true valuation of property behind each pupil in average daily attendance.

6. If current expenditures for schools in 1910 and 1922 are expressed in dollars of the same purchasing power, in accordance with the index of retail prices, per capita expenditures show an increase of only 70 per cent, and per pupil expenditures an increase of only 40 per cent during the twelve years.

7. If the estimated true valuation of property for 1910 and 1922 is expressed in dollars of the same purchasing power, the per capita amount shows a decrease of approximately five per cent, and the amount per pupil in average daily attendance a decrease of 22 per cent during the twelve years.

8. Schools absorbed a rapidly increasing share of the funds available for meeting the current expenses of all departments of municipal government from 1910 to 1923.

The degree of variability among the several cities in the matter of current expenditures for schools was striking throughout the period covered by this investigation, and was greater at its end than at its beginning.

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-Erie. Pa. Under a new program of organization, effective in September, the pupils in five schools have been placed on the alternate plan with the opening of the new term. Under the new plan, there will be six groups of pupils in two schools, four groups in one, and two groups in two schools. In all, about 800 children will attend under the alternate plan until the various

building projects have been completed.

Of 1,014 men and women enrolled during the last school year in short-term night schools. the last school year in short-term night schools in Delaware, organized to give instruction to native-born adults, 232, or nearly a fourth, were illiterates at the time of their admission, according to information furnished by the Bureau of Education. In the classes, nearly twice as many men as women were enrolled. The ages of the pupils ranged from 16 to 82 years. The colored schools excelled in the matter of regularity of attendance.

## Teachers' Salaries vs. Teacher Surplus

Will E. Wiley, District Superintendent, Lodi, Calif.

There is a troublesome surplus of teachers in the State of California this year, and it is reported that similar conditions exist in Oregon and Washington. It is difficult to believe that the tide has so quickly turned from the days of the war and that these states are facing the problems that come from having too many teachers. It is not difficult to point out several of the factors that have contributed to the surplus that exists at the present time.

Some people seem to feel that the salaries paid in California are the chief cause for the influx of teachers, and indeed that has had a noticeable effect. On the other hand, that could not account for the surplus in Oregon. The average salary of all teachers in the United States in 1925, according to the reports from the U. S. Bureau of Education, was \$1,227. The average salary in Oregon for the same year was \$1,221; the average in Washington was \$1,448, and in California was \$1,820.1 It would be safe to say, therefore, that the surplus of teachers in Oregon seems to exist in spite of

the salaries paid in that state.

The Lure of the West

The western trend of population is probably the chief explanation of the large number of teachers who are coming into these states. The romance and glamour of the west, coupled with many real advantages, make it a land of promise to many a teacher who wishes to break away from unhappy conditions. There is always the feeling that greater opportunities are to be found in a new country and so each year there are many ambitious teachers coming west.

Another factor that is exerting a growing influence, is the increase in enrollment in schools above high school grade. This increase has been faster than the increase in the general population. Between 1890 and 1922, population increased in the United States at an average rate of 2.3 per cent per year. The average gain in college enrollment over the same period was 10.8 per cent per year.2 This steady increase in the number who attend normals, colleges, and universities is having a marked effect upon the available supply of teachers. In a state like Oregon, where the professional requirements for a teaching certificate are not high, a very large per cent of the college graduates are making teaching a sort of stop gap in their professional careers. A member of the faculty of the University of Oregon made the statement recently that fully fifty per cent of the graduates of that institution the past year were granted teaching certificates. Conditions are somewhat similar in Washington, which would indicate that an undue proportion of young people are finding temporary employment in teaching.

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Married Women Are Holding Their Positions An increasing number of women are remaining in the teaching profession after they are married. Marriage has always been the principal drain upon the profession, but since there a reduction in the number who quit teaching when they get married, the effect is the same upon the supply as if an increased number were entering. There are few figures available upon this point. However, a count of the teachers in a typical valley county in California shows 300 women teachers employed in the rural and village schools. Of this number 135, or 45 per cent, were married women. In one village school of eight teachers, all were married women.3 A further study of this tendency is needed that will not be swayed by the prejudices

that too often enter into a discussion of the married teacher question.

The above causes, as well as other factors, have operated to build up a surplus of teachers in these three western states. The over-supply is forcing a new set of problems upon the schools, which must be solved with extreme care. An over-production usually means a decrease Any attempt to cut the wages of teachers will meet with stubborn resistance from the leaders in public education. They realize that the hope for better schools and better teachers is coupled with an adequate salary schedule. The problems must be met from at least three different angles if an adequate solution is to be achieved. Those who certificate teachers, those who prepare teachers, and those who employ teachers must cooperate in the final solution.

Professional Requirements for Teaching

For many years California has been increasing the professional requirements that teachers must meet in order to be certificated, and a further increase is indicated at this time. This is the easiest and simplest method for regulating the supply of teachers and does have the effect of keeping many out of the profession who wish to teach as a temporary matter.

It has not yet been proved, however, that this is the best way to select teachers. While many are kept out who are not particularly interested in teaching, it is probable that many are kept out who would make, or already are, excellent teachers. Neither has it been proved that, when the prospective teacher has taken an increased number of professional courses, she becomes a better teacher. Albert Ray Lang, after making a study of 267 California teachers in 1923-24, declared that "teaching success seems to be related to other factors than training and experience, for which additional training does not tend to be a substitute and additional experience does not seem to overcome." He further states: "Given training such as California teachers have, there seems to be a slight tendency for the less efficient elementary teacher to have taken the larger amount of professional training in preparation."4

The findings of Dr. Lang would at least suggest that there is probably an optimum amount of training for elementary and high school teaching beyond which there are no adequate returns. If that is the case, then those who are responsible for the increase in requirements must be sure that they are not exceeding the optimum amount of training necessary. To exceed that amount will be wasteful of energy and of wealth and may result in keeping very desirable candidates out of the teaching ranks.

#### Compensation Should Keep Pace With Requirements

Along with an increase in the requirements for certification, it is only natural for the teacher to expect an increase in her compensation. The two have gone hand in hand in California and today that state ranks first in the amount of money spent for education per inhabitant. Washington and Oregon rank eleventh and twenty-first, respectively, in amount of money expended per inhabitant. It would seem, therefore, that in Oregon and Washington an increase in professional requirements would be entirely justified and would bring those states more in line with California. The increase in requirements would tend to cut down the supply of teachers and would make an increase in salaries possible. In California, the

<sup>4</sup>Albert Ray Lang, Stanford University, Doctors' Dissertation, p. 100.

high salaries already paid will make further increases difficult and the indications are that a further increase in training will be made at the expense of the teacher. Other methods should also be employed in that state to deal with the surplus teacher problem.

So long as there was a shortage of teachers. the directors of teacher training institutions did not feel the necessity of eliminating their in-competent candidates. There was a position for every teacher that could qualify for a certificate. Now the conditions are vastly different. The employers of teachers are demanding the best and the school that places inferior teachers on the market will soon find that it has ruined its market. The converse of the proposition is true. The school that prepares superior teachers will find that there is an increasing demand for its graduates. This is true because administrators have found that the best way for them to meet their problems is to employ teachers whose outlook is broad, whose training is sound, and whose leadership in the school and the community wins recognition because of its sheer worth. Of such teachers, there will never be a surplus and the school that can produce them will find a position for every worthy graduate.

#### Eliminating the Potential Failures

In their endeavor to prepare first class teachers, the teacher training institutions will find it necessary, somewhere along the line, to cull out those who are not qualified to become real teachers. Too long, teaching has been looked upon as a safe haven for those who could do nothing else. Many administrators will welcome the chance to eliminate the unfit and in so doing they will cut down the surplus of teachers in the place where a cut will do the most good.

The remaining students, who have the personality and intelligence to become efficient instructors, can be given more careful training than in the past. This is especially needed in the high school field where many have felt that a knowledge of subject-matter was the essential thing. As a result, the education of the children is often being neglected by teachers who are busy teaching subject-matter. It is entirely possible that the low correlation found by Dr. Lang between professional training and success was due to the type of professional training given.

At the present time the brunt of the whole situation is falling upon the school superintendent and his board. In every community there is a vociferous, even if small, element demanding that the cost of education be reduced. Already, they are beginning to point out that the surplus of teachers will make it possible to cut the salaries of the present faculty. They contend, that if the teachers refuse to stay at reduced salaries, there are others with approximate training and experience waiting to take the places left vacant.

#### Superintendents on the Defensive

Thus the school administrator is placed on the defensive. He knows that low salaries have not prevented a surplus of teachers in Oregon. He also knows that he cannot expect the best work from poorly paid employees. He will find it necessary, therefore, to work out some policy whereby he can justify the payment of adequate salaries to his teachers. This should be no impossible task, for the people of America have a vast faith in their schools. It is only natural for them to desire that the schools should be run on an economical basis, but they are per-

U. S. Bureau of Edu. Bulletin, 1925. No. 42. U. S. Bureau of Edu. Bulletin, 1924. No. 14. <sup>18</sup>an Joaquin County Directory of Teachers, 1925-26.

feetly willing to spend their money if they can be shown that it is being spent efficiently.

Many schoolmen will try to sidestep the real issue and will favor further increases in the professional requirements that teachers must meet before they can be certificated. As was pointed out above, such increases may be justified, but certain it is that more requirements will tend to keep out of the west many excellent eastern teachers and will discourage many prospective teachers. Such a solution is better than trying to reduce the surplus by cutting wages, but, if properly used, the surplus can become a real benefit to the schools instead of a menace.

Every teacher worthy of her profession desires to be paid on the basis of the service she renders rather than on the basis of an artificial supply. Every administrator should be able to justify his salary schedule on such a basis and, if he cannot, the people have a right to place him on the defensive. Teaching is not day labor. It is a highly skilled profession and the contribution the teacher makes is admitted by everyone. Surely here is the platform upon which even higher salaries for teachers can be justified.

#### Salaries Should be on a Service Basis

Every school has its quota of inefficient teachers. Assigners of pages in a textbook, immersed in monotonous detail, they give rise to the sharp criticisms that are often leveled at the schools. Many of them were promising teachers, but because of indifference, laziness, poor leadership, or other causes, they have failed to keep up professionally. In California it is impossible to dismiss such teachers from a system after the second year because of the tenure law. Nevertheless, these teachers will either have to be eliminated or reenlivened before salaries can be justified on a service basis. It is hardly fair to charge tenure with creating this class of teachers. It is a contributing factor in some instances, but more often it is just an obstacle that prevents many superintendents from shifting their responsibility to some other unsuspecting school system. If superintendents and supervisors spent more time trying to keep teachers interested in their jobs and alive to their shortcomings as teachers, tenure would have a better chance to function as an aid to stability in the profession.

Before it is possible to establish promotion and salary on a merit basis, it is necessary to adopt a rating scheme. It should not be necessary to defend this step in a modern school system. Supervisors, principals, and superintendents have always passed judgment upon the teaching ability of the teachers in their schools, even though it was often snap judgment. Teachers realize this and many times are taking the lead in demanding a more scientific judgment regarding their work. As Anna M. Thompson stated at the 1925 N. E. A. meeting, "since rating is being done, it ought to be done as scientifically as possible."

#### Teacher Rating is Widely Practiced

While it may be admitted that no absolutely accurate system of rating has been constructed, the same thing might be said about the grading of pupils by teachers. Teachers do not hesitate to promote or fail pupils after observing or measuring their work. In like manner, "let teachers withdraw and enter any other kind of occupation and they will soon learn that, except in the most menial kind of work where there is a wage scale, each person is paid according to his merit as determined by one person, the owner or manager." There is no great likelihood of injustice being done for, as J. Slawsons has pointed out, "there is a positive

correlation between official position and judicial capacity.<sup>7</sup> This has always been recognized in hiring teachers and that it is being recognized more and more in the classification of teachers is shown by recent surveys which indicate that approximately 75 per cent of the cities of the United States over 25,000 in population practice teacher rating.

The nature of any rating plan will depend upon the purpose it is intended to serve. Two purposes are advocated here. The first purpose should be to guide teachers into better service. In order to do this the rating must diagnose the teacher's work and suggest the proper procedure for remedying existing defects. This will call for supervisory skill and professional mastery and the teacher has a right to expect this from her superiors. "The continued marking down of weaknesses may awaken ultimately the most stubborn type of unconscious mediocrity to a realization of her condition."8 If the above purpose is carried out, the constant pressure for more efficiency will result in better teaching.

The second purpose of a rating scale should be to group teachers according to merit. Those who develop into superior teachers should be rewarded. There is small justification for the salary schedule that pays the inefficient teacher the same as the superior teacher. Without a system of rating, however, it is impossible to reward the efficient teacher without provoking discontent among the other teachers. Charges of favoritism, political pull, snap judgment, and prejudice are sure to be made. When the rating is used in such a way that the teacher is helped and then is rewarded when she improves, she will not feel that she is being discriminated against.

At the present time, ambitious and efficient teachers are fretting at the lack of opportunity for progress.<sup>9</sup> In a recent questionnaire study, 25 per cent of the teachers declared that lack

<sup>7</sup>J. Slawsons Jour. of Applied Psychology, Vol. 6, pp. 161-171 (1922). <sup>8</sup>John Almack, American School Board Journal, Nov., 1919. <sup>9</sup>Charles W. Bursch, Stanford University, Masters Thesis.

of visible chances of promotion is one of the most disagreeable features of their work. In her fight for public recognition of the value of the work she does, the superior teacher must carry the dead weight of the indifferent, the indolent, and the incapable teacher. It is not fair that she should have to do this.

Rating Tends to Improve Teaching

The use of a teacher rating scale to reward merit will prove one of the most effective means of improving teachers in service, and will make the superior teachers more contented. It will probably tend to weed out the inefficient, for some of them will prefer to drop out rather than make the effort necessary to receive a satisfactory rating. The early elimination of these teachers is desirable, for again it cuts down the surplus where a cut will do the most good. At the same time the average teacher will be kept out of the rut and will not settle into that self-complacent mediocrity from which it is so hard to arouse her.

People do not flock to the cheap doctor, but on the contrary, they patronize the expensive specialist. They have always recognized that some teachers are better than others, but uniform salary schedules for all teachers have made them feel that the cheap salary is the only fair salary to the public. The superintendents now have a chance to demonstrate that the superior teachers are underpaid and that the poor teachers can be improved or eliminated.

To summarize: The surplus of teachers that exists in the three western states has created many problems. At the same time there now exists a great opportunity for educators to improve the personnel of the schools. It is now possible for the credential departments to set up standards that allow only well trained teachers to secure certificates. Normal schools and colleges can send their best into the classrooms as teachers and direct the poorer students into employment where they will be more successful. The employers of teachers can raise their standards, greatly improve the quality of their work, and increase the rewards of a profession that has long been underpaid.

## Supervised Study: Has It a Value?

B. F. White, Superintendent of Schools, Little River, Kans.

The advantages and disadvantages of supervised study have been the basis of many arguments among school men. High school systems have been completely reorganized in order to adopt the newer supervised study plan, yet many very good superintendents maintain that the new plan has more inherent evils than possible values.

While the advantages from the outstanding investigations seem to lie with supervised study, especially in the fact of its great help to the poor student, yet much evidence is given of the superiority of the traditional forty-minute period so that one is at a loss to know just what to believe.

That administrators are interested in the success of supervised study is evidenced by the fact that almost fifty per cent of the principals of the high schools of the North Central Association of Schools and Colleges say that they favor a sixty-minute period, which implies supervised study, while but sixteen per cent of them actually have school programs with periods that long. It was with the purpose in mind of adding a little evidence to one side or the other of the question that I undertook the experiment, the main facts and findings of which I shall relate.

The problem was to determine the effect of supervised study in Kansas high schools upon success in making grades in the University of

Kansas. The experiment takes its results from the actual working conditions of 32 Class A schools of each type (supervised study and nonsupervised study) with the irrelevant factors of the two groups so equated or eliminated that the conclusions are defensible.

After a number in order to make the two groups equivalent as to sex, mental age, and chronological age, the study of 270 cases, of which 135 were from supervised study high schools and 135 from non-supervised study high schools, was undertaken.

The grades made as freshmen in the University of Kansas by the 270 individuals under consideration were copied from the official records and weighted according to the value of the total grades made by each individual. This gave each student what may be called a weighted grade score. The medians of the scores of the two groups were then computed. The result was that the supervised study group had a median weighted grade score of 3.17 while the non-supervised study group had a score of 2.97. (The highest possible score for any individual was 5 and the lowest 1.) This result would seem to indicate that the supervised study in high school had actually helped somewhat in the matter of making grades in college.

In order to get a more definite idea of the actual amount of advantage, the differences in (Concluded on Page 143)

<sup>&</sup>lt;sup>5</sup>N. E. A. Addresses and Proceedings, 1925, p. 375. <sup>6</sup>N. E. A. Addresses and Proceedings, 1925, p. 375.

## The Administration of School Building Programs'

Osman R. Hull, Ph.D., Associate Professor of Education, University of Southern California, Los Angeles

Third Article

The cost of administration of a school building program may include only the architect's fee under the simpler forms of administrative organization, or it may include the entire payroll and office expense of an elaborate departmental organization. Under the type of organization as used by Denver, the architect's commission of six per cent includes engineering, heating, ventilating, and lighting service, general inspection and supervision. While the board arranges for much of this work to be done by other firms, the expense is included in the fee for architectural service and by arrangement with the architect is paid from his commission. If the architect is prepared to furnish this special service, it is included in his fee. The board of education may, in addition to the architectural service covered by the commission, employ an inspector for the board or require that the superintendent of building maintenance or building engineer perform this service. They may also employ consulting educational specialists or employ as a regular member of their administrative staff an assistant superintendent who is specially trained in directing school building program work. An architectural fee of six per cent, however, often includes special educational service at a cost to the architect of about one-half of one per cent. Under the foregoing plan the determination of the overhead cost of construction is relatively simple. consisting only of the architect's fee applied to the cost of the building, and the prorating on the basis of cost of the salary of the inspector or the expense of the assistant superintendent's office to the buildings constructed during the year. Time spent by the superintendent of schools or members of the general administrative staff in determining the educational requirements as to buildings or in the approval of plans is chargeable to general administration of the school system.

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The department type of organization involves two main classes of expense: (1) those items directly chargeable to an individual building, and (2) those items of expense of a general character that apply to the whole building program and are prorated on the basis of cost to the individual buildings at the end of the year. Those items directly chargeable to an individual building include the time of the project architeet and his draftsmen, engineers, inspectors, and others while working on the plans of that building or supervising its construction. Expense items of a general character include the salary of the chief architect, head inspector, clerical assistance, general office and drafting room maintenance, supplies, and transportation. This expense, taken as a whole, is prorated to the different buildings under construction during the year in proportion to the total anticipated cost of the building.

In those cities where the cost accounting system posts overhead charges as a separate item of building cost, it is not difficult to determine the per cent overhead cost of construction. Altogether too frequently, however, the items of overhead expenditure are scattered throughout the charges for the individual building, often without designation as to the nature of the expenditure, and accurate overhead cost data are obtainable only by careful and tedious search through almost inaccessible original charge slips.

 $_{\rm June~and~July}^{\rm 1}$  and 2 of this series appeared in the June and July issues of the Journal.



#### The Significance of Overhead Cost of Construction

A six per cent architect's fee applied to a \$500,000 building represents an expenditure for architectural service and overhead cost of construction of \$30,000. In cities where the building program provides for but two or three buildings per year, the annual expenditure on this basis does not admit the feasibility of establishing as a substitute a full-time department with its many items of expense that continue during productive and slack times alike. Also a small department will not attract the best architectural service, for no architect who has built up a successful office and practice will care to stake his future on the uncertainty of a salaried position in a public department, unless the salary is particularly attractive and the opportunity of winning distinction quite certain. The payment of the standard architectural fee of the region, on the other hand, permits the board of education to select the best school architect and to require of him the highest professional service. Anything less than this is false economy in the construction of school

In the larger cities, however, where the building program is continuous and many buildings are being erected at the same time, an expenditure of five or six per cent on an annual expenditure of five or ten million dollars favors from the standpoint of cost, the establishment of a department of architecture and construction, with a staff trained in the requirements of the local school system. Much unnecessary waste in the duplication of effort may be avoided, and the best contributions of the building studies can be accumulated and conserved. A large city department is also in a position to attract desirable talent in architecture, and by careful management may administer the building program of the city at a distinct saving to the schools.

#### Limitations of the Use of Overhead Cost in Comparing Types of School Building Program Organization

In the effort to construct their schools at a low overhead cost, the small city may content itself with mediocre architectural service and dispense with expert structural, mechanical, or educational engineering service, failing to attract desirable leadership on account of the low salaries and low fees paid. The American Institute of Architects has established fees for stated kinds of architectural service, and in terms of fees a city will get little more than the service indicated by the commission. Economies are usually made under those conditions by providing supervision of construction, inspection and some engineering service from the regular school organization.

The large city with its carefully organized and cumbersome building department may be seriously handicapped in its progressive development by the addition to its housing facilities of school buildings constructed from pigeonhole sets of plans and specifications, which, due to the press of low cost operation and the rush orders for more buildings to overcome the present shortage, have not received the study and revision required to make them equal to a new design created to meet the latest developments in the educational program. Under the duplicate building or unit plan of construction there is practically no cost for plans and specifications after the first set is prepared, and where a number of buildings of the same grade are being constructed simultaneously, this plan may be used for the time without serious disadvantage. except in the individuality of building design and adaptability to its surroundings. Low overhead cost in the larger cities is, therefore, not necessarily at the expense of adequate school planning, but may be the result of careful organization and economical management.

#### Summary

1. Overhead cost of construction is defined as the cost of administration of a school building program as distinguished from the general administration of the school system.

2. Overhead cost of construction includes all the expense of preliminary studies leading up to the preparation of plans and specifications, cost of plans and specifications, engineering and other expert service, the supervision of construction and inspection.

3. The payment of the standard architectural fee of the region permits the board of education to select the best school architect and to require of him the highest professional service.

4. A large city department of school housing may avoid much unnecessary waste in the duplication of effort, and the best contributions of the building studies can be accumulated and conserved, resulting in a low rate of overhead cost.

5. Low overhead cost in a small city employing an architect on a commission basis for all building service may indicate the omission of valuable expert structural, mechanical, or educational engineering service.

6. Low overhead cost of construction in a large city using a complete building organization of its own may be the result of an undesirable use of pigeonhole sets of plans and specifications that have not received the study and revision required to make them meet the latest developments in the educational program.

7. Overhead cost, therefore, cannot be taken as the sole measure of the desirability of any given type of administrative organization.

#### OVERHEAD COST OF CONSTRUCTION UNDER DIFFERENT TYPES OF AD-MINISTRATIVE ORGANIZATION

Overhead cost of construction is expressed as a per cent determined by dividing the total expenditures for overhead by the total cost of the building. From this definition of overhead cost it appears that the method of determining the overhead cost of construction for a city or group of cities is to divide the total overhead expenditures by the total outlays for the new buildings to which the overhead expense applies. This method is used since it gives the most accurate determination of overhead cost under the several types of organization, as shown in the first table (19A) of this article.

For comparative purposes the mean overhead cost of construction for each type of organization is calculated from a distribution of buildings by per cent overhead cost of construction for each building, classified by types of administrative organization (Table 19B).

Also Table 19C is given, showing the distribution of cities by mean per cent overhead cost of construction for each city, classified by types of administrative organization, for the purpose of showing the variability and the central tendency of the mean overhead costs for

TABLE 19A.—Per Cent Overhead Cost of Construction for Each Type of Administrative Organization, Calculated from the Outlays for New Build-ings and the Expenditures for Overhead.

	rugs and the EA	hountentes tot ove	A BECEBUL.
	Outlay		Mean
	for New	Expenditures	Per Cent
Type	Buildings	for Overhead	Overhead
I	\$203,873,712	\$10.554.302	5.17
II	16.966.624	1.134.425	6.68
III	40,486,904	1.717.327	4.24
IV	204.125.038	6,840,596	3.34
v	7,350.384	417,519	5.68
Tot	al \$472.802.662	\$20,664,160	4.37

TABLE 19B.—Distribution of Bulldings by Per Cent
Overhead Cost of Construction, Classified by
Type of Administrative Organization.
Showing both Buildings for which only overhead
cost data were given and those buildings for which
both overhead cost and unit cost of construction data
were obtained

were obta	meu.	1	11	Type III	IV	v	
Per Cent Overhead Cost	Total No. of Bldgs.	No. of Bldgs.	No. of Bldgs.		No. of Bldgs.		of B.
10.5	1	1					
10.0			* *				
9.5	***		* *	* *	* *		
9.0	1	1				* *	
8.5			* *				
8.0	6	6					
7.5	4	3		1		* *	
7.0	17	14	3				
6.5	36	26	7		3		
6.0	185	115	18	10	29	13	
5.5	85	59		25	1	0.0	
5.0	203	140	3	4	51	5	
4.5	106	35		44	27	0.6	
4.0	92	21		46	25	0 6	
3.5	60	53		1	6		
3.0	86	45		10	31	0.5	
2.5	34	7		6	21		
2.0	104	3		4	97		
1.5	56					56	
1.0	5				2	3	
0.5	1				0 0	1	
				-	MANUFACTURE NAME OF THE PARTY NAME OF T		
Total							
Bldgs. Mean	1082	529	31	153	351	18	
Per Cent							
Overhead	4.38	5.06	6.11	4.28	2.98	5.72	
S. D.	1.55	1.20	0.49	1.03	1.55	0.45	
P. E.	1.00	1.40	0.70	4.00	4.00		
(Mean)	0.03	0.04	0.59	0.06	0.06	0.71	
The ab	ove table	should	be rea	ad as	collows:	At	8

The above table should be read as follows: At a cost of 6.5 per cent for overhead a total of 36 buildings were erected; 26 of these buildings were erected under the type I form of administrative organization, 7 under type II, and 3 under type IV. The mean per cent overhead cost of construction for the 1,082 buildings built under all five types of administrative organization was 4.38 per cent; under type I 5.06 per cent, etc.

TABLE 19C.—Distribution of Cities by Per Cent Over-head Cost of Construction, Classified by Type of Administrative Organization.

Mann	Matal	т	II	Type	IV	v
Mean	Total	N 0			No. of	No. of
Per Cent			No. of	No. of	Cities	Cities
Overhea	d Cities	Cities	Cities	Cities	Cities	Cities
8.0	2	2	* *			0.6
7.5	2	1	1		0.0	* *
7.0	3	2	1		0 0	* *
6.5	2	1	1			* *
6.0	24	19	1	1	2	1
5.5	9	7		2		
5.0	30	25	1		3	i
4.5	3	3				
4.0	3 6 8 8	3 2 6 5		3	1	* *
3.5	6	6			0.6	
3.0	8	5		1	2 3	* *
2.5	3				3	
2.0	5	1			4	
Total	-	400000		_		_
Cities	103	74	5	-7	15	2
Mean						
Per Cen	t					
Over-						
head	4.94	5.18	6.40	4.57	3.50	5.50
S. D.	1.35	1.16	0.86	1.01	1.46	0.50
P. E.						
(Mean)	0.09	0.09	0.26	0.26	0.25	0.24

(Mean) 0.09 0.09 0.26 0.26 0.25 0.24

The above table is to be read as follows: Operating under an overhead cost of 8.0 per cent there are two cities, both using the type I form of administrative organization. Operating under an overhead cost of 5.5 per cent there are nine cities, seven using the type I form of administrative organization, and two using the type III form of organization.

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The distribution of cities shows a concentration at the mean overhead costs of 5.0 per cent and 6.0 per cent, the two predominating rates of type I. The mean of all the city mean rates, however, is only 44 per cent, due to the influence of the low rates of type III and type IV.

Tables Nos. 19A, 19B, and 19C show a consistent rank order of types of organization in terms of overhead cost, as determined by (1) the outlays for new buildings and the ex-

penditures for overhead: (2) the distribution of buildings by per cent overhead cost of construction; and (3) the distribution of cities by the mean per cent overhead cost in each city.

2. The rank order of the types of organization, with the mean per cent overhead cost as determined by each of the three distributions is as follows:

		Mean Per Determined		verhead as tribution of
Rank	Type	(1) Outlays	(2) Cities	(3) Buildings
High	II	6.68	6.40	6.11
Above Median	V	5.68	5.50	5.72
Median	1	5.17	5.18	5.06
Below Median	III	4.24	4.57	4.28
Low	IV	3.34	3.50	2.98

The cost of school building program administration is less under Type IV, or the full city department plan of organization, than under any of the other four types. Type III, or the department plan using outside architects, ranks next to the lowest type in cost. The median cost is represented by Type I, which gives the architect full responsibility. Type V, the associated architects, and Type II, the supervising architect plan, rank higher than the other types in overhead cost.

3. All differences in mean per cent overhead between the types of organization are significant.

## A Filing System for the High School Office

Rhea M. Wakefield, Neodesha, Kans.

No high school can expect to carry on its business in a businesslike way without an orderly, up-to-date, well kept filing system.

We have installed in the Neodesha high school office a filing system which was compiled from a number of systems and adapted to the needs of a high school office. It has proved suc-

It is very important that the files of the high school be complete and their material available, because they serve the principal, the teachers, the parents, the students, and other schools and organizations. When the principal is interviewed concerning a certain pupil, he finds in a well-kept file the grades which that student has made each six weeks, just how many times his name has appeared on the weekly failing list and exactly what happened in each disciplinary case in which he has been involved. If the student has been truant, if he has written his own excuses, if there has been any previous correspondence with the parents, an orderly file quickly brings all the facts to light.

No student would care to attend a high school where he was not sure his grades and records were being accurately kept so that he could carry them to college or into industry with him. Of course, these condensed records are all compiled from more complete records which are essential to the records for each year.

It is well known that extra-curricular activities make correspondence, programs, eligibility lists, and contracts which must all be carefully preserved and easy to find. It seems that any complete, succinct record which is carefully kept for one year, if it does not aid in catching some young criminal or in keeping some undeserving student from entering an outside activity while neglecting his lessons, it will, at least, furnish material for some educator's paper, thus advertising the school.

In order to make the Neodesha high school files more serviceable, after considering various filing methods in relation to the needs of the high school office, we last year revised them according to a more suitable plan. The new scheme has been used more than a year and found almost adequate. Only a few additions have been made.

A file chart was devised which divided the file into twenty groups. Each of these groups is represented by a card in the card index, on which are listed the sub-divisions of this group. For each sub-division there is a folder bearing the name of the folder, the number of the group of files to which it belongs, and the letter which denotes the individual folder. Each file or folder is also represented by a card in the card index. These cards are kept in alphabetical order, while the folders in the file case are kept in numerical order. This fact makes the position of the files so easy to learn that it is not always necessary to use the card index.

We have made the material in the files more accessible to those who are not familiar with the divisions of the file by adding cross reference cards. These cards carry a name under which one might look for a certain paper, but which name is not found in our system. For instance, a card labelled "Annual" refers you to "Student Publications," and a card labelled "School Board" refers to the "Board of Education "

At the close of each school year, that material which will seldom be used, yet which may be needed at some future date, is carefully sorted into groups which are labelled, returned to their folders, and retired to the transfer cases. These transfer cases, by the way, may be anything from an old filing cabinet to a bunch of pasteboard cartons, whose top surface dimensions are the same as those of the folders. If the latter are used, the number and name of each folder it contains should be written on the outside of each carton. It is never necessary to delve into these transfers until one is sure that the material he is seeking is to be found there. A glance at the card index will tell us. At the time the folders are transferred, their cards are filled out listing the individual letters or papers or groups of letters in each folder.

All of the papers in every folder bear on the upper right hand corner the number and letter of the folder which contains them. This plan saves time. In the original filing, a large number of papers can be numbered rapidly by the aid of the file chart. Placing them in the correct folders is very easy after they are num-When material from the files has been in use, it can be quickly and easily returned.

We found that the big problem in reorganizing our filing system was to determine the most logical names under which to file material. We were unable to find articles in the current educational publications which contained any suggestions for high school filing. Since the divisions in this system are so different from those in other business institutions, I am listing our file chart in full.

FILE CHART: NEODESHA HIGH SCHOOL Compiled by Rhea M. Wakefield, Secretary to the Principal

- 1. ATHLETICS
  1-A, Basketball, before Sept. 8, 1924 (In Transfer "A").
  1-B, Basketball, after September 8, 1924.
  1-C, Bleachers, Portable (In Transfer "A").
  1-D, Kansas State High School Athletic Association. See 13-D.
  1-E, Tournament (2 files in Transfer "A").
  1-F, Track.
  1-G, Football (before Sept. 8, 1924, in Transfer "A").

  - 1-G, Football (before Sept. 8, 1924, in Trans"A").

    1-H, Verdigris Valley League. Also see 1-F, 1-G, and 1-B.

    ACTIVITIES, ROUTINE

    2-A, Announcements, year 1923-1924 (in Transfer "B").

    2-B, Announcements, year 1924-1925.

    2-C, Assembly, year 1923-1924 (in Transfer "B").

    2-D, Assembly, year 1924-1925.

    2-E, Visual Education, Corres, year 1923-24 (in Transfer "B").

    2-E, Visual Education, year 1924-1925 (in Transfer "B").

  - 2-E, Visual Education, Corres, year 1923-24 (by Transfer "B").
    2-F, Visual Education, year 1924-1925 (in Transfer "B").
    2-G, Visual Education, Corres, year 1924-1925.
    2-H, Visual Education, year 1924-1925.
    2-I, Schedule of Classes.

    (Continued on Page 147)

## The Salaries of Superintendents of Schools and Mayors in Cities of 100,000 Population and Over

#### Part II

#### Donald M. Kidd and O. M. Clem<sup>1</sup>

The Influence of Geographical Location on the Salaries of Superintendents and Mayors

The 82 cities studied were divided into four groups according to the geographical location of the states in which they are situated:

-An eastern group, including 35 cities and

9 states. B—A southern group, including 16 cities and

-A central group, including 20 cities and 8 states.

D-A western group, including 11 cities and 7 states.

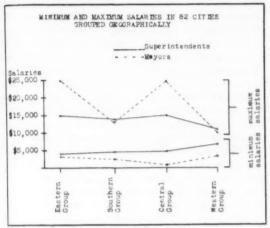


CHART 7.

Fig. 7 shows the maximum and minimum salaries of superintendents and mayors in each of the geographical groups. The highest maximum salary for superintendents, \$15,000, is paid in the eastern and central groups. This salary is \$1,500 higher than the maximum in the southern states and \$4,000 higher than the maximum in the western states. The maximum salary for mayor in the eastern and central states is \$12,000 higher than the maximum for mayor in the southern states and \$15,000 higher than the maximum in the western states.

The minimum salary paid to any superintendent in each of these groups is higher than the minimum salary paid to any mayor in each of these groups by \$1,000.

The averages in the four groups are as

1011	OWS.		
A.	Eastern Group	Superintendent\$8,234.29	Mayor \$7,348.57
B.	Southern Group	6,717.81	6,718.75
C.	Central Group	9,112.50	7,930.00
D.	Western Groun	8 963 64	6.327.27

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The average salary for superintendents is lowest in the southern states. It is \$1,516.48 more in the eastern states; \$2,394.69 more in the central states; and \$2,245.83 higher in the western states. See chart 8.

¹Mr. Donald M. Kidd, Director of Vocational Education and Continuation Schools for the Board of Education, Syracuse, N. Y.; Dr. O. M. Clem, Associat Professor of Education, Syracuse University, Syracuse, N. Y.

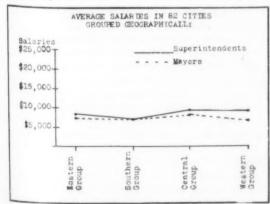


CHART 8.

It will be noted that the eastern states, in spite of the fact that they include the large cities of New York, Philadelphia, Boston, Washington, Baltimore, and Buffalo, have a very low average.

## The Effect of Fiscal Independence on Salaries of School and City Officials

In considering fiscal control, cities are generally divided into three classes: (a) Independent cities; (b) dependent cities; (c) special cities. These types are defined by Mc-Gaughy.1

For the present study, special cities are classified with dependent cities, as the authorities to whom they present the budgets for approval usually have power to cut or otherwise change the items.

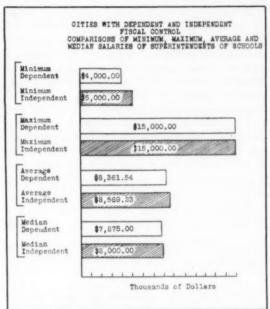


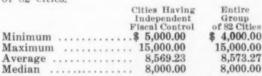
CHART 9.

It will be noted in Chart 9 that the minimum, average and median salaries in cities having independent fiscal control are higher than in cities having dependent fiscal control. The differences are as follows:

Minimum-\$1,000 more in independent cities. Median—\$125 more in independent cities. Average—\$208 more in independent cities.

The maximum salaries are the same in both

On the other hand, the salaries in cities having independent fiscal control are practically the same as the salaries for the entire group of 82 cities.



The minimum salary for independent cities is \$1,000 more and the average salary is \$4 less than for the entire group of cities.

Chart 10 is presented in order to show the marked differences in salaries for mayors in cities having independent fiscal control. With the exception of the maximum, the salary is much higher in every case. The differences are

Minimum salary	0	0	0			0	0	0	0	9			
Average salary .													greater
Median salary	6	0	0	0	0	0		0	0	0	0	. 800.00	greater

'The Fiscal Administration of City School Systems. J. R. McGaughy. Report of the Educational Finance Inquiry Commission.

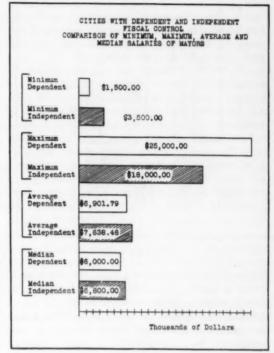


CHART 10.

These facts are also true when comparisons are made with the salaries received by mayors in the entire group of 82 cities.

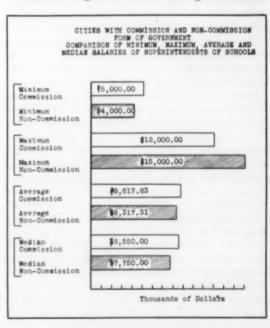
	Cities Having Independent Fiscal Control	Group
Minimum	\$ 3,500.00	\$ 1,500.00
Maximum	18,000.00	25,000.00
Average	7,638.46	7.174.07
Median	6,800.00	6,000.00

From these facts it appears that independent fiscal control of schools may be advantageous to the mayors as well as to the superintendents of schools.

#### Effects of Commission or Council Manager Types of City Government on Salaries of Superintendents

One of the most recent developments in city government has been the introduction of the commission or council manager form of administration.

The notable facts in connection with Chart 11 are that the minimum, average, and median salaries are higher for cities having commission



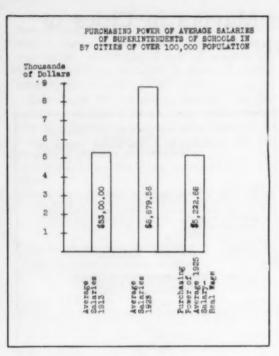


CHART 12

forms of government and that the maximum salary is lower. The differences are as follows for commission forms of government:

When compared with the salaries of the entire group of 82 cities, these differences are found:

Minimun	1			0			0	0		0	0	0	0	0	0			6		\$1,000.00	higher
																				3,000.00	
Average		0	0	0	0		0		0	0	0	0	0	9			0			44.00	higher
Median						0		9	9		0				0			 	 	550.00	higher

The salary paid a school superintendent may not be a true measure of the value of an executive, but in the long run the size of salary is a rough indication of success. If the school board decides that it wants superior officers, from Chart 1 it can determine what salaries are being paid to superintendents in the group to which they belong. For instance, the best paid one-third of the superintendents in cities of over 100,000 population are receiving from \$10,000 to \$15,000 a year. In order to attract a superior superintendent, therefore, the school board must pay at least \$10,000.

In determining the salary for a superintendent, the index of the cost of living should also be considered. The purchasing power of the present dollar, and its real value in terms of the index of the cost of living, should be ascertained. For example, if a superintendent in this group should have been employed in 1913 at a salary of \$5,000, the index of the cost of living should be procured and the present purchasing power of the proposed salary deter-The index of the cost of living furnished by the United States Bureau of Labor Statistics for 1924 was 170, using the 1913 salaries as 100.2 Therefore, this superintendent should receive at least \$9,500. This means that \$9.500 in 1924 has the same purchasing power that \$5,000 had in 1913; and that to give this superintendent a positive increase, more than \$9,500 should be given him.

In 1921, Miss M. L. McAdoo compiled a list of the salaries of superintendents of schools in 57 cities of over 100,000 population. A comparison was made to determine if the earnings of these administrators have kept pace with the increased cost of living, or the decreased purchasing power of the dollar.

The average salary for these officials in 1913 was \$5,300; the average salary in 1925 was \$8,879.56. Taking the 1913 salary as 100, the index of the 1925 salary is 170.2 Therefore, \$9,010 in 1925 would have only the same purchasing power as \$5,300 had in 1913. We are justified in concluding:

A. The purchasing power of the average salary of superintendents in 1925 is \$130 less than in 1913.

<sup>2</sup>Monthly Labor Review, Vol. XIX, p. 114.

B. Superintendents in the cities studied have not received positive increases in salary. The actual purchasing power is less than in 1913

Chart 12 compares the average salary received with the purchasing power of the average 1925 salary.

As opposed to these suppositions, consideration of the median salaries shows the median for 1913 as \$5,000, and for 1925 as \$9,000. However, \$8,500 in 1925 had the same purchasing power as \$5,300 in 1913.

By adequate and higher salaries, not only are boards of education able to get a superior type of superintendent but the probabilities are that he will stay longer in the same place. A study was made by E. C. Denny in 1924<sup>3</sup> showing that in a group of cities paying relatively high salaries for their size the average service of the superintendent was 6.7 years and in a lower salaries group in the same states the average service was five years; that is, the superintendent was retained in the same place one-third longer when he received a relatively high salary.

All the foregoing studies appear to indicate that superintendents in cities in the United States with 100,000 and over population are not receiving adequate salaries. The case is well stated by W. Randolph Burgess, who says:<sup>4</sup>

"The keenest competition for men in business and professional life is the competition for leaders. If the schools are to secure and retain able leaders, the salaries paid must rise to meet new salary levels. To make the case more pointed, the city which paid its superintendent \$10,000 before the war should now be paying \$20,000 for the same kind of ability.... In discussions of salary schedules there should be as great care taken to insure able leadership for the schools as to insure for the lowest paid teachers a reasonable standard of living."

<sup>3</sup>American School Board Journal, May, 1924, pp. 53-54—E. C. Denny, Ass't Professor, Department of Education, Iowa State Teachers' College. <sup>4</sup>Trends of School Costs—W. Randolph Burgess, p. 108.

## Why I Do Not Want to Be a Small Town Superintendent Again

By One Who Was

I refuse to go back to a small town superintendency for the same reasons that made me leave the profession in the first place.

Now, I realize that my personal troubles are not of much interest to other people. However, so many better men than I have been driven from the profession by conditions not a great deal different from those which were responsible for my exit, that I am venturing to narrate with some detail the chain of circumstances that led to my resignation.

Life in a small town is thoroughly enjoyable and I know of no more fascinating job than that of running a school. I am not in sympathy with the attitude of a friend of mine who exclaimed the other day, "It would not be so bad to be the superintendent of schools in a small town if you did not have to live there."

On the contrary, I am a small-town product, and if there is such a thing, mine is a small-town mind. Except for the two years that have passed since I resigned the superintendency at Blank to take a position in the school system of the metropolis of the state, my entire life has been spent in villages and cities whose population was less than five thousand.

Small midwest towns form the settings of most of the memories I cherish: The little county seat on the prairie where my father and brothers still run the general store that father opened the year I started school; the village where I had charge of my first school, and courted the little fourth grade teacher who became my wife; the little city in the heart of

the dairy country where we were married; the town in the corn belt where we began housekeeping.

These last two years we have spent in the city have not robbed me of the belief that the small town is a mighty good place to live. My children miss the broad expanse of soft lawn over which they were able to romp before they were transplanted to the confinement of a city apartment. When we go back to visit my folks at the prairie county seat or my wife's people in the little dairy center, the people whom we meet do not seem to suffer by comparison with those with whom we come in contact in the city.

My conviction is that there is no better place in the world to live than a small town, provided a man is not in the business of running a school. I also think that there is no finer job in the world than that of running a school if that school is not located in a small town.

For one thing I should hate to go back to the uncertainty of tenure that is characteristic of small town superintendencies. To be accurate, I suppose I should say not the uncertainty of tenure, but rather the certainty that tenure will be comparatively short. However capable a superintendent may be, and however smoothly things may be going, he is pretty sure to be haunted occasionally by the question, "When is the axe going to fall?" Not, "Is the axe going to fall?" you will notice, but "When is it going to fall?"

The other day, the news that a school superintendent of the state had completed twenty years of service in the same community was given considerable space by the daily newspapers of the city. Did you ever hear anybody marvel at the fact that a doctor, dentist, or lawyer had been practicing his profession in the same place for thirty or even forty years? In the case of these other professions we rather wonder what is wrong when a man does move. My father has run a store in the same block since the year that William Jennings Bryan first was a candidate for the presidency, but I have yet to find anybody who has thought it worth any comment. In that time, by the way, my old home town has seen five superintendents come and go, and at that it is considered a rather stable school town.

In my first superintendency, the oldest inhabitant could not remember a superintendent who had stayed more than two years. When I stayed three, they began to worry that they had me on their hands for life. As I was unpacking our furniture in the next town, an old man, our next door neighbor, came up and by way of friendly greeting advised, "Don't burn up your furniture crating, young fellow. You'll need it again before very long; all our superintendents do." I had no regrets that I followed his advice.

People do not attempt to run an editor, a merchant, or a doctor out of town because the cut of his clothes, his religious beliefs, or his political affiliations happen to be different from theirs. But if he is a small-town school man, they are ready to massacre him professionally for less weighty reasons than a peculiarity in the color of his necktie. One of the ablest superintendents in the state, a man who has built up a highly efficient school organization in his city, was asked to submit his resignation this spring because he is not a strong platform speaker. I know of another man who is seeking a new job because he had his teeth filled by the wrong dentist, the wrong dentist not from the standpoint of professional skill, but that of influence in the school board.

We never dared buy a home because we knew that if conditions made it necessary for us to leave town, we had no assurance that we could dispose of it to advantage. As we learned to our sorrow, the only house that is for rent in a small town is one that nobody thinks worth buying. Twice we lived in old mansions that were the prides of their respective towns when they were built in the early seventies. Their bedrooms were large enough to make a comfortable drill hall for a company of national guard, and their ceilings so high that the only warm spot in the house of a winter evening was atop a twelve-foot step ladder. One house we rented had its toilet facilities three hundred feet away from the house, three hundred feet of huge snowdrifts in the winter, and three hundred feet of mud in the spring. In another, the year we went to bed early, the only source of illumination was old-fashioned coal-oil lamps. Another had its water supply at the kitchen pump of a neighbor half a block away. Once we were overjoyed at being able to rent a new modern bungalow, but such bliss was too overpowering to last. My wife had barely gotten her curtains hung when the place was sold, and we were again forced to decide which of the old discarded shacks of the town offered the least possibilities of discomfort.

I am approaching forty, and the life of a rolling stone no longer appeals to me. I don't want to have to pack the china in a barrel again; I don't want to crate any more furniture; I have no desire to tear away again from friends we have found, and begin life all over again in a new environment. I want to be able to buy a house and begin preparing for a comfortable old age. I want to plant apple trees with the expectation of eating the fruit some day. Of one thing I am sure: I shall not be able to do anything of the kind if I go back to a small town superintendency.

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Neither should I relish again the taste of the grief and expense incident to the seeking of a new superintendency. I do not care to look forward to another spring such as several I spent when I was a superintendent-Monday to Friday busy at school; then over the week-end a strenuous campaign for a new job; railroad fares, bus fares, hotel bills, interviews all day Saturday with conscientious board members trying hard to appear interested, though I was perhaps the tenth aspirant who had hunted them up that day; interviews with board members not so conscientious who made no bones of the fact that they were bored to death at the whole performance and completely fed up on schoolmen; days and weeks of suspense; a polite note or a neat little printed statement from the clerk of the school board which I had visited informing me that Henry Smith of Podunk had been selected as their superintendent; another day completely ruined.

If I had felt that a man's professional qualifications were the deciding factor in the selection of a new superintendent, I should not have minded it so much. But the more I saw of superintendency elections, the more convinced I became that professional fitness was only one of the many factors involved in the selection.

I began to feel that sheer luck, a striking first appearance, and high pressure salesmanship often played more important parts if anything, than a man's ability to run a good school.

Nor do I believe that this is the school board's fault. Every school board with which I have been connected has had in the membership the cream of the community, people far above the average in business ability, intellect, and public spirit. In every election I have seen, the board has honestly tried to select the best man available for the job. The trouble is that even a super board of laymen would have a difficult time selecting the best man out of fifty, sixty, or eighty professional men, regardless of the profession in which the selection was made. If I had to select from among eighty lawyers, very few of whom I had seen or known before, the best man to handle my affairs in court, I am not sure that my judgment is so infallible that I should beyond doubt get the best lawyer in the bunch. After weeks of interviewing of candidates and the reading of recommendations, it is no wonder that school boards often become blurred in judgment, and that factors that should have no bearing on the situation often play a big part.

I witnessed one election where the lucky candidate owed his election to the fact that he belonged to the same church denomination as one of the board members. This particular board member was a mighty fine man except for the fact that he believed that all virtue began and ended within the confines of his church. The moment he learned that Candidate  $\Lambda$  was a member of this church, he became his loyal ad-

vocate. Since none of the other board members was very definitely committed to any other candidate, he had little difficulty in persuading them that his choice was the right man for the place.

When I resigned at Blank in July, 1924, employment conditions were unusually unfavorable so far as schoolmen were concerned. Our section of the country was in the midst of a financial depression, business was at a standstill, and men who had abandoned school work for business a few years before were drifting back into superintendencies. As a result the Blank school board had an opportunity to make its selection from a field of unusually strong men. Several of the candidates not only had advanced degrees but also excellent records of successful administration of school systems larger by far than the Blank school system. None of these men secured the job, however. It went to a young fellow barely out of college, with the minimum of experience required by law. owed his selection in part at least to his ability to play trombone in the municipal band and center field on the baseball team.

No, I do not want to go back. It is true that my principalship here in the city is paying me a good deal less than I received as a superintendent; but if I want to rent a house, I can rent a good one; if I want to buy a house, I can do so without having to worry about being forced to move away from it in a year or so because of loss of my job; and most important of all, I know that my advancement is going to depend pretty largely on the way I run my school.

## The Student Council Idea in a Small High School

Walter L. Conway, Kalispell, Mont.

A large amount has been written about the extra-curricular activities in large high schools; about the machinery arranged for conducting these activities in an organized manner, and in such a way that the school derives the maximum benefit from them.

It is undoubtedly true that more thought has been expended upon this idea in large schools than in small. It does not necessarily follow, however, that the large schools have a monopoly upon the problem. In fact, the problem is just as real, and in many cases presents a more immediately menacing front, in the small high school.

An attempt to apply the extra-curricular activity program of a large city high school to a small school would have about the same result as an attempt to make a similar adjustment in the curriculum itself. The necessary adaptation would finally result in something scarcely to be recognized as the original program.

In view of the fact that the very great majority of high schools are small, it seems advisable to arrange a program which can be applied to the school with little or no adaptation. The Flathead County high school, of Kalispell, Montana, has had such a program in operation for several years.

Statistics show that the average high school has an enrollment of 178 pupils. Flathead, with an enrollment of between 600 and 700, has rather outgrown her own program in some respects, and must in the future look forward to a gradual change to the methods of the larger schools. However, the success of the plan here for several years, and its adoption by a considerable number of smaller schools, lend color to the belief that this program is adapted to the average high school.

Student control of the extra-curricular activities became an official fact here in June, 1920. Several months just previous to this were

spent in perfecting the plan of organization, and in educating the pupils to an active interest in the idea. The real work of the Student Council began the following autumn.

#### The Details of Organization

The purposes of the organization were to promote fellowship among the pupils, secure training in citizenship by the delegation of responsibility, and afford opportunities for the development of leadership. The operation of the plan has accomplished these ends.

The membership consists of all pupils registered in the high school. The dues, 25 cents a semester, are collected by the principal's office from a book fund. It is essential that dues collected in this way should be voted by the students each year. The money so collected forms a basis for the general fund.

The executive board of the student council is composed of eleven students and two faculty sponsors. In the spring of each year, the school as a whole has elected the president, vice-president, secretary and treasurer. The president must be a senior; the vice-president must be a junior, and all candidates for treasurer must be approved by the bookkeeping instructor. At the first class meeting in the fall, each class has selected two pupils as representatives on the executive board. Stress has been laid upon the idea that these representatives rank higher than the president of the class, and they are the first officers selected at the meeting. An explanation may be in order for using the past tense in speaking of the selection of these officers. The method as stated refers to the original plan of selection, which has been in operation to the present time. Last spring the students amended their constitution, changing the term of office to one semester. The idea is to afford an opportunity for more pupils to participate in the actual management of the student activities. However, an officer may succeed himself, and

in all probability some who have distinguished themselves by service to the school will be reelected. Two faculty sponsors are chosen each year by the student body, upon the recommendation of the principal. This, in practice, amounts to an appointment by the principal.

#### The Faculty Control

The faculty sponsors of the council are supposed to be conversant with all the activities of the school, and to regulate the activities of the executive board. The sponsors have the power to veto any act of this body, although it has probably never been used—certainly not during the past three years.

The student officers of the executive board perform the duties usually expected of such officers in any organization. In addition, the president acts as a member of the committee on programs for the general assemblies for the year, and frequently has charge of the general assembly periods.

The constitution of the student council requires that the student treasurer be under \$2,000 bond. This is a very wise provision. Usually the student selected for this position is honest. All of our treasurers have been. However, a student might be selected for his popularity rather than for his ability as a bookkeeper. When supervision amounted to only having the books checked once or twice a year, as has been the case here at times, there might be many things to set right. When the treasurer is under bond, he must do his utmost to help in this work.

#### The Executive Board

The executive board acts as a nominating board to select candidates for the four high offices. The objection at once arises that this makes the executive board self-perpetuating. Perhaps it does. Yet this method insures the selection of candidates capable of performing the required duties. The members of the executive board know all the pupils in the school, and form very creditable estimates of their ability, besides knowing the requirements of the positions. Only capable pupils are nominated. If left to the student body for nomination, the election would be based on popularity, which is but a poor qualification for an officer.

The principal duty of the executive board is to transact the business of the student council. This consisted, originally, in granting charters to student organizations and financing interscholastic athletics.

The original plan for chartering organizations is still used. Any group which wishes to form an organization must meet and draw a constitution for itself, elect officers, and choose a faculty sponsor. This constitution, including the purpose of the organization, is presented to the executive board. If favorably received, a charter is granted. However, this may be revoked in case the organization operates to the detriment of the school. To date, no charter has been revoked, although at times the executive board has threatened to do so. This has usually been due to failure to pay bills promptly, thus endangering the credit of the student organizations.

The sponsor system merits an explanation. In the fall, each class selects two faculty sponsors by election. In case the same faculty member is chosen by two classes, the higher class has the prior right, and the lower class must choose another. Each chartered organization selects one or more sponsors. These sponsors answer to the principal for the conduct of the organization; while the membership of the organization answers to the student council. The accompanying chart shows the manner in which the responsibility is divided. Most of the activities are not shown.



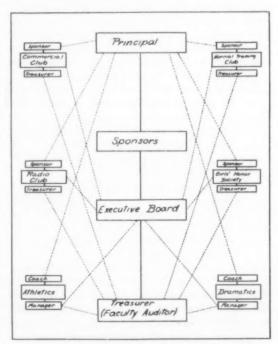
W. R. HEPNER, Superintendent of Schools, Fresno, Calif. (See Page 110)

#### The Finance Problem

When the student control of activities was first instituted, each athletic activity was separately financed. Sometimes lack of money hindered an activity. The instructor who coached the track team always thought it wise to secure a check from the treasurer early in the winter, for financing this sport. Track was the last activity of the year, and if left until its proper time, would probably be without funds. When the need for money became too pressing, since no athletic activity pays for itself, a play was given to replenish the treasury. In this way, it might be said that the student council had charge of dramatics. However, only the occasional "athletic play" came under their jurisdiction.

In the fall of 1924, the executive board decided that it could extend its activities over a much larger scope, and bring about better harmony among the various activities. As there was no provision in the constitution to prevent this, the board simply assumed greater powers. Instead of only athletics and a few plays, it assumed control of all the student activities of the school. This carried with it the responsibility of financing all the activities.

The first act in this new program was the arrangement of a budget to cover everything. A glance at the budget shows the scope of the new responsibilities.



THE ORGANIZATION AND RELATIONS OF SCHOOL CLUBS IN THE KALISPELL HIGH SCHOOL.

(Estimate	d)	(Estimated)
Expense		Income
\$ 257.16	Track	\$ 25.00
600.00	Vocal Music	
470.00	Band	
50.00	Declamation and Essay	10.00
100.00	Boys' Vocational Conference	75.00
75.00	Debate	
110.00	Extemporaneous Speaking	
	Scholarship Contests	
610.00	Football	
1.215.00	Basketball	1,355.0
-1	Book Fund	
\$3,602.16	Total	\$3,331.00

It will be noticed that the estimate did not include dramatics. This was taken into account along with the other activities, but there seemed to be no basis for an estimate, so it was left out of the budget.

#### The General Fund

The estimated expense was prepared by the faculty sponsor of the activity at the beginning of the year. The executive board ruled that in no case might an activity be allowed to exceed its estimate. In order to meet the financial needs of such a program, a provision was made that the money accruing from all activities should be placed with the student treasurer, for use in the general fund.

Naturally, some activities did not produce the estimated income. However, the plan resulted in the financing of all the activities mentioned; tennis courts were built, and an old bill for hall rent for basketball practice, which had been hanging over the school for years, was paid. And at the end of the year, there was a little money in the treasury.

It happened that at this time the student treasurer was a real bookkeeper. So the executive board arranged that all money relating to any student activity, including classes and organizations should be handled by him. The class and organization money, of course, was placed in separate accounts on the treasurer's books, and was subject to the wish of the organization. The treasurer himself, however, signed all checks, upon an order from the faculty sponsor of the organization. The money from all activities subject to the budget, including dramatics, was placed in the general fund, subject to the order of the executive board. The bookkeeping instructor was placed in charge of all accounts, and it is his duty to see that they are in order at all times. This year, an additional step has been taken. A member of the bookkeeping class has been assigned to keep the books of each organization, and all accounts are required to check with those of the student treasurer. An old requisition-in-triplicate system for orders upon the treasurer, arranged by the first student treasurer but fallen into disuse, has been revived, and is rigidly followed. For the protection of the treasurer, a faculty sponsor of the student council inspects all requisitions, and signs all checks with the treasurer.

#### Values of the Plan

Amendments to the student constitution may be voted at any time by a two-thirds majority of the entire student body, after the secretary of the executive board has posted the proposed amendment for two weeks. A possible amendment, which might be beneficial, is a provision for the recall of the officers of the executive board, thus making them more strictly responsible to the student body.

The points of this system, as it is now used, which make it practicable for the small school, are the following:

- 1. Organization on a class basis.
- 2. Election of the principal officers by the entire student body.
- 3. Chartering of each organization, thus insuring a limited number of well conducted organizations.
  - 4. Budgeting of the expenses of all activities.
- Close checking of all receipts and expenditures.
  - 6. Faculty supervision throughout.

## The School Superintendent's Job

W. C. McGinnis, Superintendent of Schools, Revere, Mass.

SUPERVISORY VISITS
The value of supervisory visits is very much lessened by the common practice of giving too much consideration to details of purpose. Complexity of purpose, too much consideration of types of visits, and too much analysis of the work of teachers visited are characteristics of every book or chapter I have ever read on supervision of classroom instruction.

Supervisory visits have one main purpose and one purpose only, and that is the improvement of instruction. All other purposes and aims of supervisory visits are contained within and are

a part of this main purpose.

Too often supervisors lose sight of the main purpose in the multiplicity of special aims and purposes connected with special types of visits.

Of course, a superintendent, a supervisor, or a principal must at times make visits for specific purposes but these specific purposes are too many to enumerate. He visits to see whether a particular teacher's socialized recitation plan is good. He visits to see whether a teacher is a poor disciplinarian, as reported. He visits to see if the teacher's aim as stated in the lesson plan is being accomplished. He visits to get an idea as to whether the teacher tests the knowledge of pupils in subject matter, to observe the technique of the teacher, etc. He visits superior teachers for the purpose of getting material for suggestions for poorer teachers. He visits to observe work on an experiment or project. He visits a teacher whose re-nomination is doubtful to get first hand information. He makes other visits which may be listed as types of visits, but they are all for the purpose of improving instruction in his schools. If he keeps that purpose in mind he will accomplish more than if he bothers himself and everyone else with detailed analysis of what he is trying

Superintendents should visit classrooms for the purpose of getting acquainted with the pupils. The immediate aim may be to establish friendly relations with the pupils but the purpose is to improve instruction. The objection so often raised that a supervisor must not interrupt or attract attention by inspecting the work of an individual pupil or by quietly speaking to a pupil and must not walk about the room, is far outweighed by the results obtained through the confidence, satisfaction, and appreciation on the part of the pupils because of the friendly relations established between the supervisor and the individual pupil.

Teachers and pupils alike are more ill at ease, more conscious of the presence of a visitor. and less likely to proceed in a natural manner when the visitor sits still and observes, than if the visitor walks about some, and looks at blackboard work, at written work displayed on the walls, and inspects work on the table. This is not just theory. Most teachers agree that a supervisor who comes in and sits at the desk is more conspicuous than one who "roams" around.

The following reports on supervisory visits are typical and suggestive:

#### SUPERVISORY VISIT No. 1 (Working With Teacher)

This type of visit is rare in my practice. Grade, Third, 42 pupils. Teacher, young, recent graduate of Normal School, one year's

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recent graduate of a subject: Spelling.
Subject: Spelling.
Spelling words were taken from written composition. Method was good. Words too difficult. Teacher asked me whether I wanted to make any comment on the lesson. I said, "No." She asked me whether I approved of it and I said, "No," and then suggested that I would come back at close of school in a few minutes. At that time I called her attention to the fact that to take misspelled words from the day's

written work is certain to restrict rather than to expand the pupils' vocabulary and that if word lists for spelling are taken from written work they should be taken and used in such a way that the pupils do not recognize them as misspelled words from their compositions. I also stated that small children (although they should be taught to be careful in spelling) should not be restricted in oral composition to words they know how to spell. The written work in question was the writing of stories first given orally.

result: A better selection of words for spelling, and a recognition of the fact that the teacher should be careful not to restrict the pupils' vocabularies.

#### SUPERVISORY VISIT No. 2 (Working with Principal)

(Working with Principal)

I hardly ever worked out supervisory problems of visits except through the principals.

Grade, Fifth, 47 pupils. Teacher is well trained and has taught ten years.

Subject: Geography.

Form of recitation, the socialized recitation.

Topics were well written up and on blackboard.

The procedure was as follows: A pupil came to the front of the room, asked one question from one pupil, accepted the answer if correct, designated the next pupil who came to front of room, and the process was repeated by pupils.

room, and the process was repeated by pupils. The questions, for the most part, were closely related to the topic subjects, and many of them were questions which involved reasoning and demonstration in the answers, but many of them required only a statement of fact. Some pupils who were not called on showed resentment. On the whole the pupils seemed to enjoy the reci-

Objections to procedure.

1. Loss of time. Too much time was used up in having pupils walk to the front of the room and back to seats for one question and answer.

2. The lesson was not really socialized.

3. Many poor teachers (the pupils) were being substituted for one good teacher. (She is

a good teacher.)
I talked the situation over with the principal and found that the teacher had seen this particular form of the socialized recitation when visit-ing recently, and that it differed so much from her own practice that she wanted to try it out. Result: A return to our own form of social-ized recitation, one of the principles of which is,

"Never substitute a poor teacher for a good one unless necessary."

SUPERVISORY SURVEY No. 3 Working with neither Teacher nor Principal)

Junior High School.

Junior High School.
Subject: First Year Latin.
Teacher: College graduate, Phi Beta Kappa, several years' experience.
The purpose of this visit was to compare or contrast the methods of this teacher with those of another teacher of same subject matter who was getting poor results in another class.
Approach to lesson was good. Interest of pupils was keen. She tested the pupils' knowledge of assigned matter, gave them an opportunity to demonstrate it, and socialized the recitation by allowing discussions in which she observed the three principles of a socialized recitation: Be brief.—Stick to the point.—Give reasons.

Assignment of advance lesson was made properly and definitely.

Result: I sent the poorer teacher to observe the work of the better teacher and am getting better results in the second class.

School administration, including supervision, is not so complex and intricate but that plenty of men and women big enough to fill all the superintendenencies in the country can be found to fill the jobs properly if they are given authority to perfect the right kind of organizations for administration and supervision.

It is a well established principle of public school administration that the superintendent of schools should not have to attend personally



to the details of administration. The business manager is an officer of many school departments, who relieves the superintendents of the details of office management, and is responsible to the superintendent directly and through the superintendent to the school board for the clerical work in the administrative office. School departments that provide this type of administrative organization make it possible for the superintendent of schools to devote the most of his time to the problems of education. The superintendent should know the business and financial part of administration. He should be an expert on the budget and on preparing the budget scientifically, but he should not be required to do the actual detailed clerical work and figuring involved in compiling the budget. He should delegate that work, or have the school board delegate that work to a responsible assistant.

The efficient superintendent must have a thorough knowledge of office management and office organization. He must have the ability to instruct and train his assistants in their duties and responsibilities. He must possess the capacity for delegating authority to his assistants equal to their duties and responsibilities, and he must have the common sense not to work on details himself after he has obtained competent and well trained assistants.

So far as the business administration is concerned his job is to organize the administrative force, to train the members in their respective duties, to hold them responsible for the proper discharge of those duties, to give advice and assistance when needed and to give general su-

pervision of policy and procedure.

School boards and school superintendents should come to a realization of the fact that the welfare of the schools and the efficiency and economy of administration cannot be properly cared for unless the superintendent is relieved of the necessity and the burden of personally looking after the details of supervision and administration. The superintendents are more to blame than school boards for the lack of proper organization and a sufficient number of capable assistants in the supervisory and administrative departments, which exists today in many cities of 10,000 to 100,000 population. School boards are not professionally trained to know the requirements of a first class school organization system. For the most part they are open minded and are ready to adopt any recommendation of the superintendent if convinced that it will make the school system more efficient.

It ought not to be difficult to convince a lay board of business and professional men and women, such as the school board, that it is neither good business nor common sense to require a \$6,000 or \$10,000 a year man to do routine office work which can be done just as well by a \$22 a week clerk. And yet many superintendents are doing just that kind of routine office work. They personally make up the payrolls. They figure the details of the budget and spend weeks at it every year. They personally attend to all office correspondence. They prepare bills for payment and they make out the monthly financial statements. In fact, they putter. They are the errand boys of the school boards.

One of the important duties of the superintendent of schools is to convince the school board of the importance of releasing the superintendent's hands from the fetters of subordinate routine matters and to give him authority equal to his great responsibility for the proper organization and supervision of the school system. (To Be Concluded)

## Coatrooms, Wardrobes and Lockers

A Review of a Nation-wide Study by the School Board Journal Charles G. Loring

Part II

In the Journal of September, 1926, the opinions in various professional books and official pamphlets were noted and a summary was given of the replies to a questionnaire about coatrooms and wardrobes. Coatrooms, referred to separate rooms with hooks and lockers; in the centralized type there would be only two to a building or to a floor, while in the unit type there would be one to each classroom. Wardrobes, referred to hanging space, 2' to 3' deep with a row of doors opening directly on a classroom or on a corridor.

The consensus of opinion favored coatrooms or wardrobes for the primary and grammar grades, but lockers for the junior and senior high schools. The general recommendations are tabulated at the end of this article which deals in detail with the location, construction, and ventilation of steel lockers for the pupils' outer wraps, not with gymnasium lockers.

Lockers when arranged along the corridor should be recessed in the walls to prevent dust and rubbish accumulating upon them. neatness of appearance, they should be raised on a sanitary base. Careful selection is needed to avoid projecting parts which will tear light Full and evenly operating ventilation is difficult to obtain. The corridors should be wide enough, not only for the actual depth of the lockers, but also to prevent the pupils from obstructing the passageway when getting out

The ordinary double-tier lockers are unsatisfactory because the lower tier are not high enough and the hooks in the upper tier cannot be easily reached. A special type has two vertical compartments for coats side by side, and over them two horizontal compartments, one above the other, for hats; space in these is rather limited and the amount of hardware is doubled. Metal is far more sanitary and permanent than wood. The floor space per pupil both of locker and the extra room needed in front of it is larger than in wardrobes, and the material is more expensive.

Lockers may be massed in central coatrooms for boys and for girls but, if in the basement, the space must be well lighted, dry and commodious. It is better to distribute these rooms two to a floor to avoid congestion, to facilitate supervision, and to shorten the distance a pupil must go between classes for books or materials. When lockers are in large groups, there is danger that only the room will be ventilated rather than each separate locker, and wet wraps in an enclosed space should have warm air drawn past them to prevent unhygienic condi-Enclosed locker rooms may invite loitertions. ing and for this reason the alcove grouping is coming into favor. This is a compromise between placing the lockers along the corridor walls and placing them in enclosed coatrooms; they are grouped in open alcoves on each floor off the hallways, with outside light and a clear view from the corridor of all the floor space. In some cities, as New York, an ordinance forbids the storage of wraps in the hallways, owing to the danger, that in an alarm of fire, the pupils may stop for their wraps instead of leaving the building without delay.

Key or Combination Locks
What is the best way to lock lockers? Evidently there is no ideal solution.

Thirty-two administrators prefer keys and 25 the combination locks, while 34 architects prefer keys and 34 combination locks; few were completely satisfied with either method. Many accepted keys, if the locks were masterkeyed,

and others with the proviso that pupils be charged with lost keys.

The chief objection to key locks was the confusion and expense due to loss of keys; some of the points in favor were the quickness of operation, the ease of repair, and the placing of responsibility on the pupil. The chief objections to combination locks were the difficulties of keeping the older makes in repair, lack of security, and yet one reply listed them as "ideal and educational."

Two manufacturers were consulted. The Durabilt Steel Locker Company wrote: "We recommend a lock with keys in preference to a combination lock. For first place, we would recommend the cabinet type of lock with grooved keys; second, the cabinet type with flat keys; third, keyed padlocks; fourth, combination padlocks; and fifth, combination cabinet locks. The grooved key type is more secure and harder to pick; one of the advantages with keys is that in nearly every case, someone would have a master key. Where padlocks are used, in the majority of cases, there will be every style and description on the lockers. The millennium so far as locks are concerned, has not been reached and we doubt if it will ever be when considering the relative cost of the locks and the lockers.

The Durand Steel Locker Company wrote: "The relative merits of rim key locks and combination locks is a question of personal opinion. Keys will be lost but they can be replaced; we carry duplicate sets of all keys and shipments can be made within an hour or two after the order is received. On the other hand, while there are no keys to lose with combination locks, a pupil by carefully watching someone operating a lock, may see how the combination is operated. Many times it takes too long to operate the combination."

Locker Ventilation

No conclusive evidence could be derived from the over-concise statements on the ventilation of lockers. In a few cases mechanical or fan ventilation direct from the lockers was called for, especially when built into the corridor walls: in a few cases, the mechanical ventilation of the room or corridor was clearly indicated as the sole means of drying the garments; to this group should probably belong the largest class which referred to "gravity", "louvers", "natural", "through top", and the like but which took for granted the proper ventilation of the coatroom or corridor containing the lockers.

In other words, but few lockers have direct mechanical ventilation and there were practically no unfavorable comments where openings to the room are the only means of ventilation.

The comments of two manufacturers are more explicit and are quoted to supplement the negative results of the questionnaire.

"We have had something over 22 years of locker manufacturing experience. We have built them with many types of forced air ventilation, none of which we feel is necessary. The question is one of putting the steel lockers in a room with a reasonable amount of air cir-

(Continued on Page 139)

## Supervisory Work the Chief Function of the High School Principal

C. A. Gardner, North Side High School, Fort Worth, Tex.

The visiting supervisor of academic instruction in the high school came into existence because of the inefficiency of the high school principal, or because of the improper distribution of his duties. Today the best thought in secondary education insists that the major function of the high school principal is to supervise instruction. Heretofore the principal has given his time to trivial and administrative details. Efficient clerks and assistants can do this work much better than most principals who meet the major qualifications for the principalship. If one does not have the capacity to become a specialist in supervision of instruction, as well as in general supervisory duties, he does not have the capacity to become an efficient high school principal.

The classroom supervisor in the high school, who does not also serve as principal or teacher, can never become as efficient as the supervisor who serves as principal or teacher, other things being equal. The fundamental reason for this is that one can not attain proficiency in any field in which he does not have a close touch. The supervisor is primarily working for the welfare of the child through the teacher. This work can not be very thorough and scientific unless the supervisor is in constant touch with the child, not only in the classroom but also in the many school activities of the child. Consequently the visiting supervisor or classroom instructor is but a poor substitute at best. The remedy lies in selecting only those for high school principals who have the capacity to become skilful supervisors and to relieve them of all detail duties which lower their efficiency as supervisors and which prevent their giving their major time to supervision of the teacher in the classroom. With the assistance of the

most expert teachers in the school serving as chairmen of their respective departments, the efficient principal should practically control the classroom supervision of academic instruction. While the principal should be held responsible for all administrative matters, these should be delegated to a vice-principal or expert clerks or

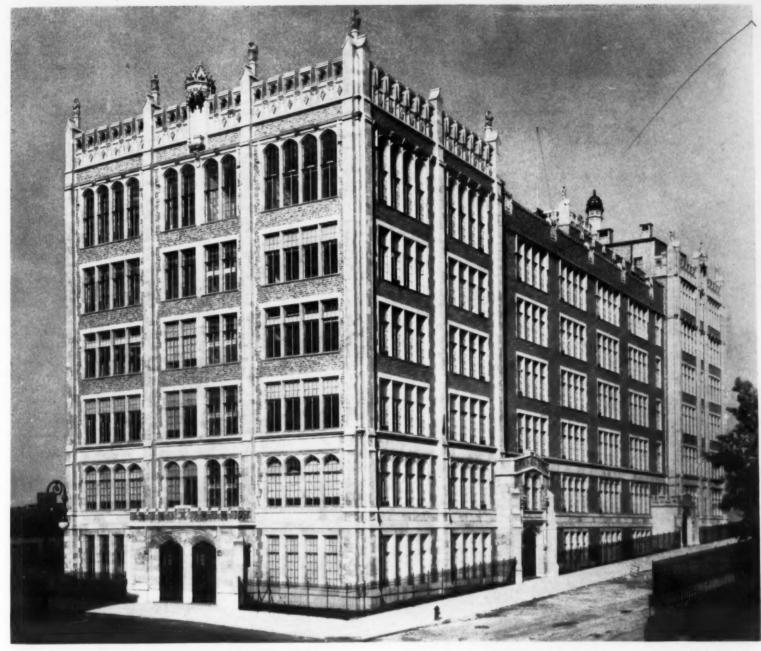
I believe the classroom supervisor of academic instruction of tomorrow will be a swing from the visiting to the residence type, where this is at all practical, because vital touch with the children is essential. The study of the nature and need of the child is of greater value than the study of methods and subject matter. Furthermore the classroom supervisor should have a pedagogical photograph of every teacher, which is possible only by continual contact. The visiting supervisor has only a brief contact with each of the several groups. The supervisors of special subjects will serve the children better if they teach at least one class daily. If the principal is functioning properly as supervisor of instruction in academic subjects in his school, he can proceed without others feeling that he is an encroachment. The visiting supervisor in this field is likely to leave a question mark in the minds of teachers as to who is their chief in supervisory matters. Furthermore, when an experiment to test the merits of a given method or subject matter is desired, the principal can proceed in the capacity of supervisor without being regarded as an encroachment. He feels free to use his school as a laboratory for this research and test. The visiting classroom supervisor is limited in this laboratory work to the extent of the cooperation in the schools visited.

(Concluded on Page 139)

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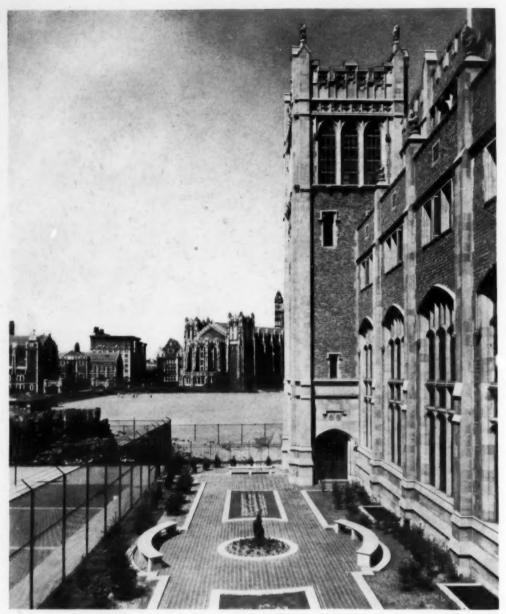
NEW YORK TEACHER TRAINING SCHOOL, NEW YORK CITY.

William H. Gompert, Architect of the Board of Education.



AUDITORIUM OF THE NEW YORK TEACHER TRAINING SCHOOL, NEW YORK CITY.

William H. Gompert, Architect of the Board of Education.



ITALIAN GARDEN, NEW YORK TEACHER TRAINING SCHOOL, NEW YORK CITY.

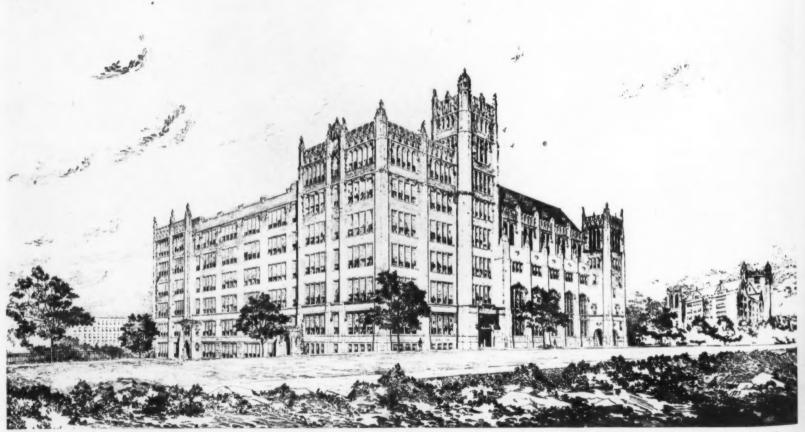
## NEW YORK TRAINING SCHOOL FOR TEACHERS

The New York Training School for Teachers is located on West 135th Street, in the Borough of Manhattan, and is the training center for the supply of teachers in the city schools. It was built to replace an antiquated structure, and is considered a model of its kind for the large cities of the country. The site overlooks St. Nicholas Park and is only a short distance from the College of the City of New York.

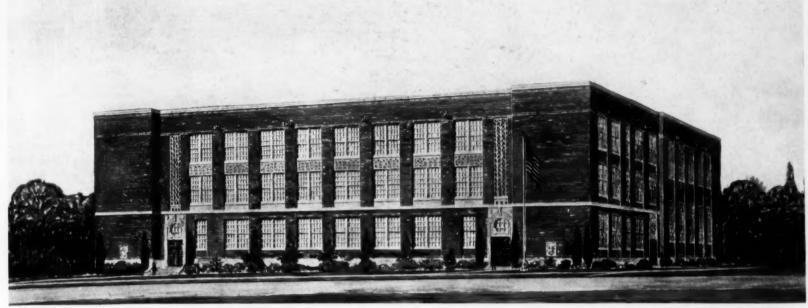
The building is in the Collegiate Gothic style of architecture. It is of the skeleton type of construction, with curtain walls of brick, and limestone trimming. A central tower dominates the building, and its formation in plan allows of enough landscape effect to give a touch of color at the base of the structure.

The building is 262 feet, 10 inches in the front, with 219 feet, 6 inches on St. Nicholas Terrace, and 81 feet on Convent Avenue. Outside play space is provided for the model school pupils, which includes basket ball courts and a play-yard space of 20,000 square feet. The accommodations provide for a boiler room, locker, shower, and toilet rooms, coal storage, vault and record store room, an indoor play room, a lunch kitchen and two classrooms in the basement; offices, store rooms, an auditorium, and fourteen classrooms on the first floor; a library, a demonstration room, an auditorium gallery, eleven classrooms, toilets and store rooms on the second floor; store rooms, toilets, rest rooms, shower and dressing rooms, twelve classrooms, a museum and an organization room on the third floor; ten classrooms, two gymnasia, supply and storage rooms, one laboratory and toilets on the fourth floor; nine classrooms, one gymnasium, preparation and dark rooms, toilets and laboratories on the fifth floor; a kitchen, cafeteria, and teachers' lunchroom, two music rooms, and toilets on the sixth floor; one music room, an office, and a machinery room and boiler room on the seventh floor.

The building houses 1,230 pupils in the model elementary school, and 1,256 students in the teacher training school. It was planned and

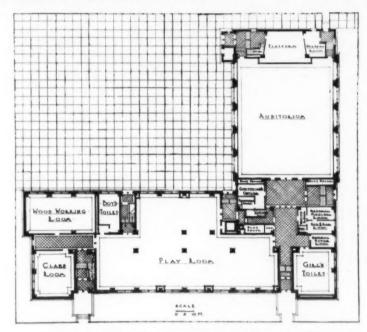


ARCHITECT'S PERSPECTIVE SKETCH OF THE NEW YORK TRAINING SCHOOL FOR TEACHERS, NEW YORK CITY.



PERSFECTIVE OF L-TYPE OF ELEMENTARY SCHOOL, NEW YORK CITY (PUPIL CAPACITY—930).

Wm. H. Gompert, Architect, Superintendent of School Buildings,



FIRST FLOOR PLAN OF THE L-TYPE ELEMENTARY SCHOOL, NEW YORK CITY. (PLAYROOM 4700 SQ. FT.; SEATING CAPACITY OF AUDITORIUM 600.)



THIRD FLOOR PLAN, L-TYPE ELEMENTARY SCHOOL, NEW YORK CITY. (SECOND STORY IS SIMILAR.)
Wm. H. Gompert, Architect, Superintendent of School Buildings.

erected under the supervision of Mr. William H. Gompert, architect and superintendent of school buildings for the New York City board of education.

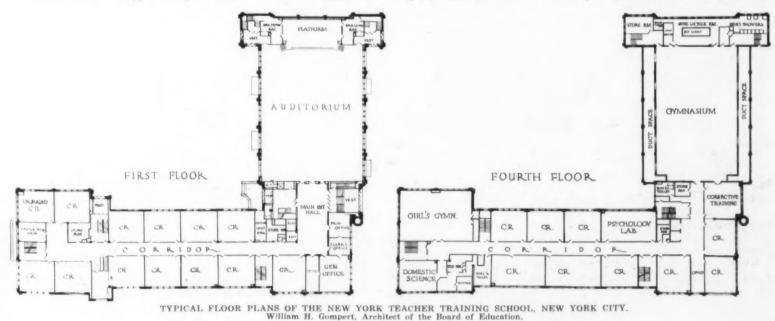
## TWO RECENT DESIGNS FOR NEW YORK ELEMENTARY SCHOOLS

The extraordinary demand for elementary schools in New York City, in neighborhoods

widely separated and undergoing different stages of development, has made necessary many types of school buildings to conform to the physical features and characteristics of different communities. The more recent types approved by the New York City board of education have been designed and erected under the direction of Mr. William H. Gompert, architect and

superintendent of school buildings, and are known as the "J" and "L" types.

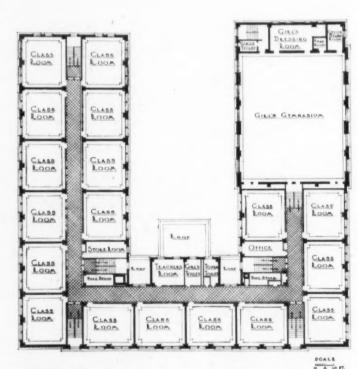
The "J" type has been designed to provide three or four-story buildings for sites having frontages of not less than 22 feet and depths of from 400 feet to 500 feet. The building has a frontage of 182 feet and a depth of 187 feet, with an open court 60 feet wide in the rear.





PERSPECTIVE OF THE J-TYPE ELEMENTARY SCHOOL, NEW YORK CITY (PUPIL CAPACITY—2500).

William H. Gompert, Architect, Superintendent of School Buildings.



THIRD FLOOR PLAN OF THE J-TYPE ELEMENTARY SCHOOL, NEW YORK CITY. (SECOND AND FOURTH FLOORS ARE SIMILAR.)

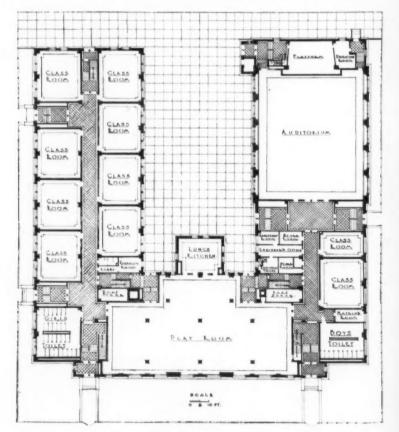
Wm. H. Gompert, Architect, Superintendent of School Buildings.

To meet the requirements of a rapidly growing section, especial attention has been directed toward providing elasticity of plan with a view of giving additional accommodations, with a minimum of alterations. In carrying out the plan, all rooms of an administrative and general nature, such as offices, playrooms, toilets, and boiler rooms, are located in the initial sec-

tion, designated as Section A. This section in

a three-story building provides sixteen and onehalf classroom units, and in a four-story building 24½ classroom units, in addition to rooms of an administrative and general nature.

Section B, or the right-hand wing, provides accommodations for an auditorium with 600 sittings, four and one-half classroom units, and a gymnasium in a three-story building. There is an additional gymnasium and two additional



FIRST FLOOR PLAN, J-TYPE ELEMENTARY SCHOOL, NEW YORK CITY. (PLAYROOM 4700 SQ. FT.; SEATING CAPACITY OF AUDITORIUM 600.)

Wm. H. Gompert, Architect, Superintendent of School Buildings.

classrooms in the four-story wing.

Section C, or the left wing, provides accommodations for 22½ classroom units in three-story buildings and 30½ classroom units in a four-story building. A complete building of four stories accommodates about 2,500 pupils and provides space for the following activities: Two kindergartens; four classrooms for cripples; one for cardiacs; two ungraded rooms;



JAMES MADISON HIGH SCHOOL, BROOKLYN, NEW YORK.

an exercise room and lunchroom for cripples; a medical clinic; open air and nature study classrooms; a library; a playroom; two gymnasiums with shower and dressing rooms; an auditorium, and 48 standard classrooms. An outdoor play yard 200 feet by 200 feet in size is provided for the pupils, with a paved area 100 feet by 200 feet, in which are located two basket ball courts.

The "L" type building was designed for sites having frontages of about 175 feet. The build-

ing is in the shape of the letter L. The design is similar in many respects to the J type, the principal difference being in the left wing, which lies parallel to the side street instead of at right angles, as in the J type.

The building is designed in the Georgian style of architecture, with the ornament limited largely to the entrance doorways. The walls are of red brick, laid in Flemish bond, and the trimming is limestone. The outstanding feature of the design is the projecting playroom on

Wm. H. Gompert, Architect, Superintendent of School Buildings.

the ground floor at the front of the building. This room has large dimensions and permits of a series of large arched windows, flanked by entrance doorways, which lend an especially pleasing interest to the design.

The architectural treatment is somewhat more modern than that of the J type. The walls are of red brick, with limestone and marble trimming. The entrance doorways and the perforated marble panels screening the stair windows (Concluded on Page 143)



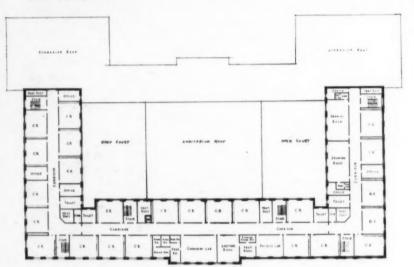
PUBLIC SCHOOL No. 38, ROSEDALE, QUEENS, NEW YORK.

William H. Gompert, Architect of the Board of Education.

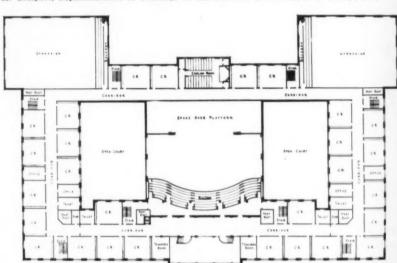


GEORGE WASHINGTON HIGH SCHOOL, NEW YORK, N. Y.

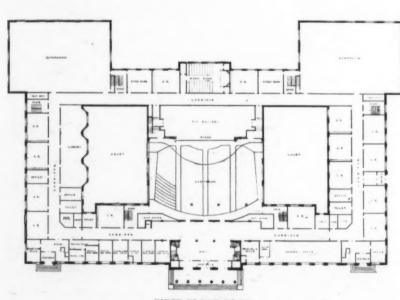
C. B. J. Snyder, Architect. Wm. H. Gompert, Superintendent of Buildings of the Board of Education, New York, N. Y.



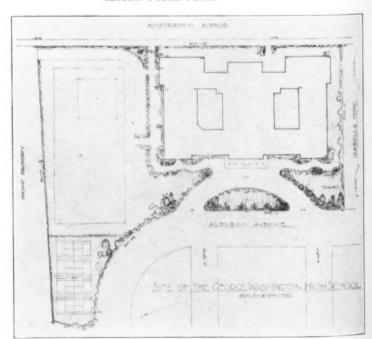
THIRD FLOOR PLAN.



SECOND FLOOR PLAN.



FIRST FLOOR PLAN,
GEORGE WASHINGTON HIGH SCHOOL, NEW YORK, N. Y.
(See Pages 143-144)

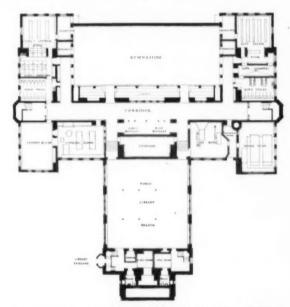


SITE OF THE GEORGE WASHINGTON HIGH SCHOOL, NEW YORK CITY, N. Y.



SOUTH JUNIOR HIGH SCHOOL, WALTHAM, MASS.

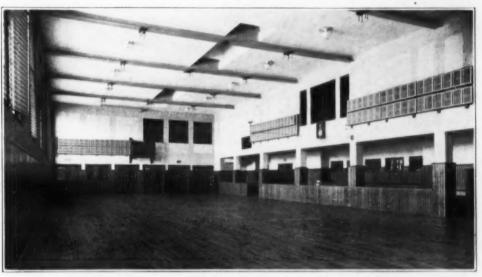
Kilham, Hopkins & Greeley, Architects, Boston, Mass.



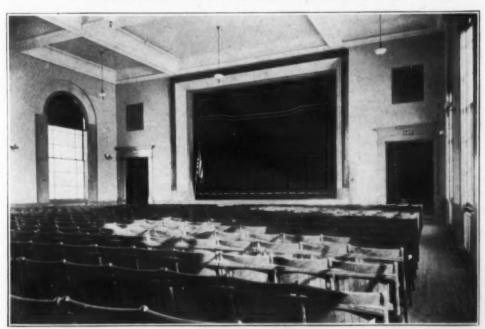
GROUND FLOOR PLAN, SENIOR-JUNIOR HIGH SCHOOL, WALTHAM, MASS.



FIRST FLOOR PLAN, SENIOR-JUNIOR HIGH SCHOOL, WALTHAM, MASS.
Kilham, Hopkins & Greeley, Architects, Boston, Mass.



GYMNASIUM, SOUTH JUNIOR HIGH SCHOOL, WALTHAM, MASS.



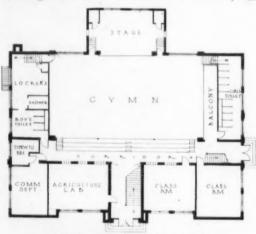
AUDITORIUM, SOUTH JUNIOR HIGH SCHOOL, WALTHAM, MASS. (See Page 144)

THE HIGH SCHOOL, ARNOLD, NEBRASKA The high school at Arnold, Nebraska, was erected in 1925 and was completed and occupied in the spring of 1926. It was erected as a result of careful planning for present and future needs, and for the social needs of the community. The latter consideration was of some importance, as the high school serves as a community center on numerous occasions. Situated in the northeastern section of the town, it is quite centrally located for the school patrons which it serves.

The plans for the building were begun in September, 1924, bids were received in January, 1925, construction work was begun the same year, and the building was completed the following spring. The building is constructed of matt-faced brick, with stone trimming. It has a frontage of 100 feet, a depth of 75 feet, and accommodates 200 pupils. The interior trim, with the exception of the stairways and corridors, which are fireproof, is of yellow pine in natural color.

The main feature of the first floor is the auditorium, which serves as a gymnasium and is easily convertible for community purposes. A fine stage, with velour curtains, footlights, picture sheet, and three sets of scenery, is located on the side in order that the audience may see clearly and hear distinctly. When it is desired to use the room as a gymnasium, the chairs may be removed by means of rubbertired trucks, and stored under a balcony which serves as a place for spectators at athletic entertainments. Permanent bleachers on the side opposite the stage provide adequate seating for a large number of persons at school events, and additional seating capacity is offered through the use of special knock-down bleachers on either side.

The commercial department occupies two well-lighted rooms on the ground floor of the building. One room is devoted to bookkeeping,



HIGH SCHOOL, ARNOLD, NEB. E. L. Goldsmith & Co., Architects, Scotts Bluff, Neb.



HIGH SCHOOL, ARNOLD, NEB. E. L. Goldsmith & Co., Architects, Scotts Bluff, Neb.

while the other is used for typewriting classes. Roomy desks, with book racks, are found in the bookkeeping department, while the typewriting room has model desks and typewriters of standard make.

The classroom for the vocational agriculture department is also located on the first floor. It is fully equipped with tables and chairs, and with gas, hot and cold water, book shelves and a built-in cupboard. In addition to classrooms, the department has an outside shop 28 feet by 58 feet in which are provided all the tools and equipment for carrying on the necessary shop

The home economics department is located on the second floor and occupies three rooms-a sewing laboratory, a food laboratory, and a practice dining room. Twenty pupils may be accommodated in each of the two laboratories, which have been provided with modern equipment. Individual desks, sinks, cupboards, and

gas ranges are provided, with fuel from a Freeport gas plant maintained by the school. In the sewing laboratory the equipment consists of work tables, a cutting table, built-in ironing board, an electric iron, a mirror, a glass display case, four sewing machines, and shelves for reference books.

The science room, located on the south side of the second floor, is provided with the Lincoln type science desks for the major sciences. Each student has access to water, gas, and electricity, and nothing in the way of the proper material is lacking in order that the work may be successfully carried out.

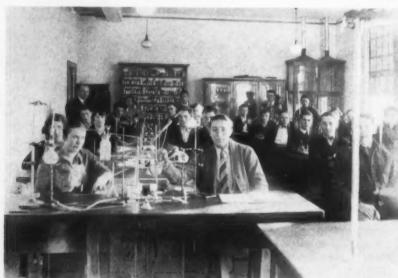
The school was planned and erected under the supervision of E. L. Goldsmith & Co., of Scottsbluff, Nebr.



DOMESTIC SCIENCE CLASS AT THE HIGH SCHOOL, ARNOLD, NEB.



SECOND HIGH SCHOOL, ARM E. L. Goldsmith & Co., Archite ARNOLD, NEB. chitects, Scotts Bluff, Neb.





PHYSICS LABORATORY AND LIBRARY, HIGH SCHOOL, ARNOLD, NEB.

## Long Term School Bonds and the Future

Leo G. Schussman, Humboldt State Teachers' College, California

One of the striking things about the method by which provision is made for capital outlay for schools is, first, the fact that just about every community in the United States seems to know only one way and that is by long term bond issues. The second feature is that single method of raising money is subject to about as many different combinations of legal specification and limits as there are States in the Union. Clearly the welfare of the child cannot be so different in different parts of the nation as to require such wide variation in the procedure by which school indebtedness may be contracted and in the diversity of limitations as set forth in the different state laws relating to the issue of school bonds. (Table 1.)

While the general practice in the United States is to issue long term bonds to meet present school building needs, there are nevertheless two plans, one which may be designated as the immediate or direct payment by tax levy, and the deferred or the prevailing method of long term bonds. The immediate method involves the payment of capital outlay by an immediate tax levy or a tax covering a few years at the most. The other is the issuing of some form of indebtedness or bond which is a mortgage on the community or district, and which defers payment to some future time with provision for stated payment of interest charges.

The question is in order, Why has not the plan of pay-as-you-go not met with a more marked popular support? Without taking thought one may answer that it is because the bond plan is better. But is it? In how many instances have the people been asked to decide between the two plans? There are those who insist that the "deer peepul" will not stand for an immediate raise in taxes for public improvements of so vital a character as the public schools, but really there is no overwhelming evidence to support that claim. In fact there is considerable positive evidence to the contrary in the case of the few communities that do pay as they build their school buildings. Again, in cases of emergencies, people have dug down very deep into their pockets to finance some essential activity or program when they fully understood the conditions and the results which

were involved in the condition which confronted them. On the other hand the almost uniform application of the bonding method so generally favored and sometimes made mandatory by law has given no opportunity to tell whether the people would not have gladly paid the higher tax for improvements and expenses about which they were fully informed.

In the last analysis the reason for the prevalence of the long term bond for capital outlay seems to be psychological. So thoroughly have bonds and buildings been associated in the thought of the public in the past that they have grown together like a pair of Siamese twins. It is also true that those interested in the loaning of money have the business right to oppose any attempt to get around issuing bonds, but on the other hand it is the equal right of those who believe in getting the most possible real value out of every dollar of the tax money, to fairly present another plan which may possibly save the community money. Neither the nation nor the community will necessarily go directly to ruin because a plan of economic procedure is put into practice which does not conform to the published dictum of the economic rulers of

Even natural laws as propounded by man have been found to be wrongly interpretated and one may at least question the infallibility of man-enunciated economic laws as they relate to the question in hand. One does not necessarily become a social pariah because he proposes to break away from the prevalent plan of mortgaging the community every time a new building is to be erected. A better way is at least conceivable.

It is at least a safe guess that in many communities, when the alternative is placed squarely before the people with a clear and comprehensive statement of the facts concerned showing the loss involved on one hand and the benefits to be gained through a different policy on the other, they will be more slow to accept the deferred plan, or-if they do, it will be with the time limit cut down considerably, provided that the law does not predestine or condemn them to a long term of bond servitude.

In most states, as is shown in Table I, the law

provides a long term of years as a maximum. A very few states, among them Oregon, provide for the possibility of redemption before maturity. Otherwise most of the statutes seem to be deliberately biased in favor of a full run of long term indebtedness with its accumula-tions of interest burdens. Why should any state place a minimum on the time a bond is to run? If a community is able to borrow money for one or three or five years, why should it be compelled to issue bonds for a tenure of twenty, thirty, or even forty years instead? There is every good reason for the establishment of a maximum time limit by law, but there is no valid reason in the interests of the community why a minimum time must be fixed. If communities must borrow money for school buildings, let their borrowing credit fix the minimum time. Surely the people should have the right to say how short a time they want to mortgage the community.

The Limit of Indebtedness There is another aspect of the bonding situation as it is now developing. It relates to the limit of indebtedness. A glance at Table I indicates the wide range of bonding limits as based on assessed valuation, the range being from two to seventeen per cent. But it is not the mere fact of wide variation in limits that is significant. The important feature is that almost universally, the bonding limit is being crowded, and will be crowded more and more, as the bond issues still outstanding for a long term of years and the new issues together cumulate and grow into even greater totals. And the school program is always the first to be curtailed as a result. Of course there is the alternative of getting the legislature to extend this limit in some states and in such cases the pressure is relieved but only for a short time. But no problem is really solved by merely dismissing it for the present.

There is every reason to believe that in many states the limit of bonded indebtedness is still much below the credit capacity of the community, and probably it may be wise to set a higher level as the limit of indebtedness. But the unfavorable possibilities must not be overlooked. A bond is a mortgage and as such it holds the mortgagor a financial slave until both principal and interest are paid in full. The community that is blindly willing to let its bonded indebtedness increase and increase may find itself bound with well nigh unbreakable chains, and the time will come when the greater portion of its income will be consumed by interest on its accumulated indebtedness and so progress is made impossible.

This is no idle dream but may be one result of putting one financial plaster upon another. The individual citizen who finds himself in this predicament may declare himself to be unable to pay his debts and the courts will grant him immunity by bankruptcy, but a community cannot so free itself from overwhelming debt. It has but one alternative, either keep on paying the interest or by a Herculean effort raise the tax rate so high that the "conservative" politicians who are responsible for the predicament will really have to do some constructive thinking to hold their offices. And this state of affairs to one who understands the nature of the average politician will be nothing short of the millennium.

The city of Grand Rapids, Michigan, illustrates the general trend of the policy of bonding for school buildings. The figures given in Table II are taken from the report of the Board of Education for 1922 and clearly indicate the steady increase in the totals of outstanding

TABLE I
DISTRIBUTION OF STATES BY GROUPS SHOWING THE LEGAL PROVISIONS PERTAINING TO THE
ISSUANCE OF SCHOOL BONDS

Legal Provision Maximum Rate of Interest: 5 per cent. 6 per cent. 7 per cent. Not Specified*	No. Atl. 1 3 0 5	No. Cent. 5 5 2	So. Atl, 1 4 0	So. Cent. 3 5	Western	Total 11 26 3	22.9 54.2 6.3 16.6
Time Limit: 15 years. 20 years. 25 years. 30 years.	0 0 0 1	2 5 1 3	0 1 1 2	0 0 3 1	0 6 1	2 12 6 8	4.2 25.0 12.5 16.6
34 years. 40 years. Not Specified*	1 7	0 0 1	0 3	0 2 3	0 2 2	1 5 14	2.1 $10.4$ $29.2$
Assessed Valuation—Bonding Limit:  2 · 2 per cent. 5 · 5½ per cent. 6 per cent. 7 · 10 per cent. 15 · 17 per cent. Varying Rates. Not Specified*	3 2 0 1 2 0	1 10 0 0 0 0	1 0 1 1 2	1 3 0 1 0 0	1 5 3 2 0 0	7 22 3 5 3 2 6	14.5 45.8 6.3 10.4 6.3 4.2 12.5
Purpose of Issue: Grounds, Buildings, and Equipment Grounds and Buildings. "School Purposes" Not Specified*	5 0 3 1	12 0 0 0	5 0 1 2	5 1 1 1	9 1 0 1	36 2 5 5	75.0 4.2 10.4 10.4
Vote Required: Majority Voters Majority Taxpayers Two-thirds vote Three-fifths vote Not Specified*	3 0 1 0 5	7 0 2 1	5 1 0 1 1	3 0 1 1 3	7 2 2 0 0	25 3 6 3 11	52.0 6.3 12.5 6.3 22.9
Terms of Sale: At Par or above. Below Par	6	6 2-95	2 0	3 1-95	9	26 4	54.1 8.4

<sup>\*</sup>No reference to bonding provisions in the School Laws as printed.

bonds for both school and municipal purposes. The tremendous increase in later years is most significant in the light of the fact that the increase in assessment values, Table III, has not nearly kept pace with the gain in indebtedness total. There is but one end to such a march. Sometime the point will be reached when the community respources will be taxed to their utmost just to meet accumulated interest charges each year and that spells ruin to all progress and advancement. But the fact is that long before this point is reached the school budgets will be pared to the bone and the children will be the ones to pay in loss of educational opportunity.

Generally the rate of interest which the bonds are to carry is fixed by the local conditions of credit of the community issuing the bonds. It is gratifying to note that the law, in the majority of states allows a maximum of six per cent or less, and further that in most states the terms of sale are fixed at par or above, and this is a real protection to the community. This prevents the disguising of a high rate of interest in a low stipulated figure, for a bond carrying 5% on its face but sold at 60 cents on the dollar would really represent an interest rate of 9% in addition to the deficit to be met at the date of maturity.

Refunding of Indebtedness

There is, however, one bad kink in the laws relating to school bonds, which is hard to justify in any manner or degree. It relates to the refunding of past indebtedness. Missouri seems to be the worst offender in this respect. the initial rate is 6% and the maximum time is 20 years, the law makes it possible to refund the indebtedness of schools when it becomes due at the rate of not to exceed 8% and for a maximum of 30 years longer. It would seem that such a state of affairs might be justified as an emergency measure, but to regularly provide for the refunding of school debts at an increased rate of interest and for a longer period of time is beyond ordinary comprehension.

TABLE II OUTSTANDING INDEBTEDNESS OF GRAND RAP-IDS, MICHIGAN-1920-22 REPORTS OF THE BOARD OF EDUCATION

	H	OARD OF E	DUCATIO	N
	Figures i	n Thousands	of Dollars	Interest paid on
	School	Other City		School Bonds
Year	Bonds	Bonds	Total	Dollars
1890	211	977	1188	\$ 9,490.00*
1891	237	1009	1246	9,670.00*
1892	297	1836	2273	16,870.00*
1893	338	1735.1	2073.1	15,210.00*
1894	351.9	1994	2345.9	15,835.00*
1895	351.9	1765.9	2115.8	15.835.00*
1896	330	1635	1965	14.850.00*
1897	312	1770	2082	14.040.00*
1898	291	1884	2181	13,370.00*
1899	282	2007.5	2389.5	12,690.00*
1900	256	2057	2313	11,520.00*
1901	247	1991	2238	11.130.00*
1902	237	2102	2439	10,660.00*
1903	227	2212	2439	10,210.00*
1904	218	2212	2430	9,810,00*
1905	250	2093	2143	11,250.00*
1906	204	1871	2075	9,180.00*
1907	167	2230.6	2397.6	7,560.00*
1908	126	3150.2	3276.2	5,670.00*
1909	303	2907.3	3210.3	13,640.00*
1910	508	3395.3	2903.3	22.860.00*
1911	581	4274.6	4855.6	26,140.00*
1912	553	4371.6	4924.6	24.880.00*
1913	523	4348.8	4871.8	26 915.00†
1914	649.5	4555.3	5294.8	25,782,00†
1915	965	4742	5707	36,398.00†
1916	1130	4728	5858	45,501,00†
1917	1345.1	4898.7	6243.8	54,537.00†
1918	1399.1	5694.9	6894	61,540.00
1919	1324.1	4844.3	6168.4	61,147.00
1920	1669.1	5056.3	6725.4	67,747.00
1921	1929.1	6229.6	8158.7	82.968.00+
1922	2384.1	7403.6	9787.7	101,185.00†

\*Estimated at 41/2%. †Actual figures.

The utter wrong and injustice of such a provision lies in the fact that in every case of refunding school bonds issued for a new building 20 years before for a period of 30 years more and with the possibility of paying 8% interest is to deliberately saddle upon the coming generations an obligation on a building that before final payment is made will have rotted into the ground, an obligation of not only the principal but at a rate of interest that may bankrupt even the most prosperous community. This is truly visiting the iniquities of the fathers upon the children of the third and fourth generations.

No doubt the hand of a lord is in it, but this hand cannot be said to belong to the Lord of Heaven in Whose realm gold and silver are not the media of exchange and in whose temple the tables of usury find no place.

As the bond is merely a convenient way of putting off the debt for payment to some future time, some provision must be made to pay at maturity. By means of the serial bond the debt is split up into yearly payments on the principal, generally as many as there are years to maturity. The other plan is by coupon bond which differs from the serial bond in that it cannot be paid off in installments but requires a payment of the principal in toto at the date of maturity.

Necessarily this plan calls for some way of raising the money to pay the principal when it becomes due. To wait until the bond falls due and then raise the entire amount would be no better than raising it in entirety when the debt is contracted. Hence to be consistent the payment must be distributed over a term of years and thus lessen the annual burden. This is done by levying a portion of the amount of the entire obligation each year and placing this money in a sinking fund where it is to accumulate year after year until the date of maturity when enough should be in the sinking fund to cancel the debt.

If the money in the sinking fund has been honestly guarded it is forthcoming, but there have been instances in both state and local affairs when part or all of this sinking fund sunk out of sight in the quagmire of political temptation. The plan calls for the loaning of this money out at interest on reliable security to offset the interest which the debt is carrying. Many states wisely limit this investment of these funds to federal bonds, bonds of the state and of the local unit issuing the bonds.

Government and state bonds are safe, but in some instances in the past such local investments in the immediate family have not been especially attractive in the outcome. there is usually always a leak in the matter of interest, for it is financially impossible to always invest the sinking fund as it comes in, so fortunately as to obtain the same aggregate rate of interest for every dollar of the fund for the full time, as is the interest rate of the debt

We are told that the justification of the long term bond lies in the fact that the children of today who benefit by the buildings constructed should in all justice pay for what they use when they get to earning money themselves. This sounds well, and yet there is another side to this proposition for what parent worthy of the name would deliberately burden his child with long term debt for the necessary things of life he consumed while growing up and getting ready for the duties of manhood? Surely just as every parent owes his children the best possible opportunities for healthy growth of body and mind, likewise every community owes its children the material housing and the chance for development without making them pay for these necessities with interest when they grow up. It is a bit difficult to grasp this sort of "justice" which so requires that type of ministration to one's own offspring. Long term bonds should be justified on some other basis.

#### COMING OF THE RADIO

Radio as an educational agent is proving a access in the training of teachers and we predict the day in the very near future when a college professor may instruct a class of unlimited numbers in private homes in all parts of the country coming within his radius, have manuscripts mailed to his office, graded, and returned, all by the means of the modern radio.—Fred H. Duffy, Steubenville, Ohio.

#### Economic Limit of Indebtedness

Reason as we may, the inevitable result is that with a community committed to the long term bond theory, the time will come when the earnings of that community will be consumed in paying for the current expenses and accumulated interest charges and progress must come to a standstill. The economic limit of indebtedness is of course expanded with the increase in the valuation of the taxing basis of the community. But even with this leeway there will come a time when this benevolent policy of making our children pay for what we owe them as a direct parental obligation of today will bind them to a grind of interest payment which in all probability will at least curtail their financial ability to meet the progressive conditions of the future.

The rule of public expenditures seems to be that if we do not pay the fiddler while the dance is on, we will pay him double tomorrow or treble the next day. It will be wise to heed the traffic signs on this financial highway. road to bondville is clearly placarded with "Go Slow" signs, so plainly that anyone who essays to drive may read.

Sometimes it is pointed out that borrowing money to make improvements and extensions is the general method which good business fol-The manufacturer or merchant, when in need of funds to extend his business, turns logically and wisely to the plan of capitalizing his credit. Likewise the school should capitalize its credit and borrow the money to finance its building programs.

But is it really always good business in case of the schools? Is it not true that the value of a bond is dependent on the earning power of the business backed by the credit of the firm issuing the bonds? Of two situations, one in which a loan is sought for a business which itself will guarantee returns in money values, and another in which there will be no money returns from the investment, the former will get the better terms in the money market. The first is a going concern financially, the other is good business only so long as there is some other cash basis for guarantee.

There is no question as to the business acumen of the man who binds his business to expand and enhance his business possibilities thereby insuring greater return of money or money values. But few students of finance will attribute any degree of business acumen to the man who mortgages his credit to the limit for the purpose of building houses on his private estate, especially if his earnings are scarcely sufficient to cover his running expenses.

To bond for a business is to borrow money for an enterprise which will return directly the some sort or a greater amount of money in earnings as is required to pay the interest and liquidate the loan. In other words a good business investment is and of itself brings in as a result of that investment more of the same sort of material required to meet the condition of the loan. The man who bonds heavily for a fine house and a magnificent estate may get the maximum of return in pleasure and health from his investment, but he must rely upon other values to produce the money necessary to pay principal and interest on his debt. It is very evident that if he is a salaried man the only way he can meet the obligations is by means of what that salary brings in. Its increase is in the hands of a third party.

The school bond is somewhat like the latter illustration. It must be paid, principal and interest, from the income which the city has from other sources than its schools. The output of the schools will not be accepted in payment of either. Merely because it is good business for the merchant or manufacturer to bond for extensions and improvements in a cash revenue producing enterprise in order to increase his tangible income, it does not follow that long term bonds for school extensions is always good business of the same sort.

On the contrary, bonding a community for a long term in order to meet ordinary expansions and replacements may be a very short-sighted policy for any progressive community. A dead town, which has the same status today that it had "when I was a boy" and which will be just as inert when Halley's comet again appears, may bond for one building and pay interest over a long term of years under the delightful delusion of not making any payments at all, but a real live community with the red blood of progress coursing through its veins may suffer from gradually creeping-on paralysis as the inevitable result of the single policy of long term bonds just at a time when it needs every ounce of its strength and vitality to meet the demands of the future.

A very interesting and significant chapter in the story of public expenditures has been written by the Island of Guernsey. The story is told in the Dearborn Independent as taken from "The Evolution of Banking," by R. H. Howe, This little island built its market house, made street improvements, provided for Elizabeth College and other schools and for other purposes by using its credit, based on its taxing power, in the shape of notes in the nature of bank notes which were non-interest bearing and redeemable in taxes, a certain proportion being retired each year.

For twenty years this plan was used to raise the island out of a period of financial stagnation into one of permanent prosperity, and then private corporations were given the privilege of issuing non-interest bearing notes while the state began to borrow money of the bank to pay interest, this in spite of the fact that the people voted to continue the state plan of issuing non-interest bearing state notes as before. Something happened to make the state relinguish its sovereign prerogative to private financiers.

There is in this little story that which makes a layman wonder why there might not be a valid opportunity for the state or the community to avail itself of the same privilege now delegated to private institutions and thus with proper legal restrictions be able to finance a part of its capital outlay for buildings which enhance the value of the community by issuing non-interest bearing notes redeemable as tax money. This is a question which might well be given unbiased consideration.

Municipal Tax and School Support

One of the urgent changes in the prevailing methods in school finances relates to the losing of the school tax in the general city tax. The school budget and school tax-rate should be separately accounted for as is done in a few states.

There are a number of reasons for this. The keeping of the school budget separate from the general budget is generally conceded to be a wise proceeding, and the reason for making this separation holds also in case of a separate tax and tax-rate accounting so that the people may understand just what their schools are costing. While the schools are under local control and support they are nevertheless not under the control of the municipal government in the same sense as are other phases of community activity. The state not only has a direct interest in the local school but through positive supervision founded upon its inherent right to direct the education of its children, and also through aid contributed to the maintenance of the public schools makes them practically state in nature and local only in point of application.

This is a condition which is not even approximated by any other phase of municipal activity. Thus intrinsically the local school tax money,

STATUS OF THE SCHOOL PRINCIPAL

Break down the traditional attitude of administrators and principals themselves that there is a real distinction in degree of preparation or experience between the elementary school, the junior high school, and the high school principal. We must do away with the false lines that educators themselves have drawn between the various fields of their work. The idea that rank is somehow associated with the grade of the school is false and distasteful. We want to see the principal of each school rated as the equal of the principal of every other school. The elementary school principal is stepping out on a platform which includes qualifications equal to that of the high school principal. It differs in kind but not in quality or quantity.—W. T. Longshore, Kansas City, Mo.

because it is raised for a purpose which is cojointly a vital concern of both the state and the community, and because the funds received from the state are merged in the local tax money for school purposes, is both by nature of its object and origin a fund entirely distinct from the general city fund and should be kept separate in both authority to levy and in control of its expenditure.

So long as the school tax is combined with and lost in the general tax-levy for all local expenses, so long will the schools be the victim of local politics. Power to levy the school tax and the opportunity to lose the identity of that tax in the general levy places in the way of the ordinary city council the temptation of making the local school tax the buffer between its municipal extravagance and the advisability of keeping the tax rate low so as to insure re-

It is all too easy to lay the blame for all increased tax burden upon the schools when no separate accounting is made of the exact proportion of local tax raised for school purposes. In many communities the art of making the schools the political goat that devours the city moneys regardless of increases in other municipal expenditures is quite evident before every municipal election. The average man of the street does not know what part of his tax dollar goes for school purposes. When he gets his tax statement of a lump sum, he cannot pick out and analyze the elements which go to make up the total. Then in many instances when he kicks about high taxes he is actually told by some obliging city official that the schools are the cause of this increase even though this may be partly or wholly false. The taxpayer accepts the explanation and there is another citizen ranged up against the schools.

This game of passing the blame has reached a point of extreme refinement and skill only because the school tax-rate is fused in the general levy, thus effectively concealing its identity. Every tax certificate should have printed thereon the exact amount of the school tax levy as a separate item so that the taxpayer when he pays his taxes knows exactly what part of his dollar goes for school purposes and what for other city purposes.

There is still another reason why the school tax and the levying of the school tax should be under the exclusive control of the school authorities and that the tax rate should appear as a separate item on every tax certificate. It concerns the very character of public school activities. If there is any point of contact which the schools must keep with the commmunity it is that of concealing nothing.

All matters pertaining to the schools should be open and above board and so placed before the people that anyone may understand them. It is prevented from doing this very essential feature of its relationship with its patrons in the matter of financial support as long as the tax receipt does not distinguish between the amount raised for school and that for other pur-

poses. Since the school can only continue to grow as it ministers to and in proportion as it keeps the confidence of the people, it is essential that every phase of school work be an open book to the public

Both the amount and the proportion of the tax money spent for school purposes should be definitely known by the people in order that they may intelligently support the public schools. The school should be given the same chance to play fair and above board with the public in this vital matter of finance as well as in other matters. It is up to the school people to see that this is done. True service in this respect is much more than educational "salesmanship;" it is true leadership.

Note: This is the first installment of Mr. Schussman's article. The second will appear in the November number of the SCHOOL BOARD JOURNAL.—Editor.

KNOW THE LAW

One of the first things I remember reading about law was this: "Ignorance of the law excuses no one." That was of course applied to those who infringed upon criminal statutes, who violated a law which carried a penalty for such violation. But I wonder if it may not be also applicable in the case of the school board. If blunders in connection with the school occur as a result of a lack of a knowledge of the provisions of the school law upon the part of some official connected with the school, I wonder if such an official can be consistently held excusable in such an instance. If some contract shows a weakness; if some company who has been dealing with the board can not be made to come up to its agreement, and it develops that the board failed to observe some phase of the school law in making the contract or closing the deal; if, in other words, an error of some kind can be found that reflects upon the legal knowledge of the board and the district suffers through a renunciation of an agreement by some disreputable company, upon whose shoulders shall the responsibility for the loss be placed?

Many times, of course, it is not so much a matter of ignorance of the school law that causes boards to make blunders that are sometimes detrimental to the interests of the school, as it is an habitual carelessness in doing official business in any way to dispose of a matter. In most cases, however, that have come under my observation, school boards, especially in the rural schools disregard the school law through ignorance of its provisions. They acquire the habit of depending upon someone else to advise them on legal matters. Frequently the county superintendent serves this purpose, while in some instances they seek the advice of a local attorney. There is usually a copy of the latest school law in the home of some member of the board. It is hardly ever referred to, however, and legions of men serve as school directors who in all their official career never as much as peeped inside the cover of a copy of the school law. I know this because they have told me so many times. The only information they have at their command is what they have got from someone else. Consequently it is not to be marveled at if this information is very vague or even positively wrong.

Sometimes this lack of knowledge of the provision of the school law works a very great hardship on the teacher. For example the following might be cited: The law of the state of Illinois provides that no child under the age of 12 shall be kept in school more than four hours daily. In some of the smaller schools where the enrollment consists only of pupils under 12 years old, it becomes necessary to give such children a maximum amount of play and to dismiss them at an early hour, comparatively speaking, in the afternoon. Many times these

(Concluded on Page 147)



# School Board Journal

WM. GEO. BRUCE }

Editors

#### EDITORIAL

#### A GRATUITOUS SCHOOL ADMINISTRA-TIVE SERVICE

Attention was recently called by State Superintendent Francis G. Blair of Illinois to the fact that that state maintained within its borders some 11,000 school district boards, aggregating a total membership of some 45,000. The men and women who served on these bodies, he continued, gave liberally of their time and thought for the benefit of the rising population, and what is more, served without one penny of compensation.

If one were to enumerate the school districts in the several states of the Union and estimate the number of those who are identified with the schools in the capacity of trustees, he would readily reach a stupendous figure.

To begin with, the city school systems, for all cities of 2,500 population and over in the United States constitute a total of 2,891. On the assumption that the average school board membership is seven persons, we have a total of 20,237 persons. But, there are states in which the number of rural school districts runs into many thousands. Each is officered by from three to five trustees, thus constituting a vast army of secondary school workers, which approaches somewhere near the million mark. The exact number has never been established by the United States bureau of education, but the above estimate is not far out of the way.

The contemplation of this outstanding fact must become a source of gratification to the American citizen who has the stability and perpetuity of his country at heart. Surely, there is something inspiring in the thought that an unsalaried army of a million men and women is giving time and thought to the mental, moral, and physical welfare of twenty-four million of school children.

#### WHAT ABOUT THE SURPLUS TEACHERS?

During and immediately after the world war there was an acute shortage of teachers throughout the United States. Teachers went into other occupations that promised a better remuneration, and fewer young men and women entered as students the normal schools and teachers' colleges.

The situation is now reversed. If the information which comes from various sections of the country is correct, we are now confronted with a surplus of teachers. The normal schools and teachers' colleges have graduated more teachers than the school systems can absorb. In cities where the salaries are favorable, and the requirements not too rigid, the pressure to find positions for new-made teachers is considerable. In the Pacific Coast states, where climatic conditions, together with an attractive remuneration, draws professional workers from the East, the surplusage is most pronounced.

The situation naturally arouses speculation as to the attitude of the agencies that prepare

for the teaching profession, and the factors that choose and employ professional service. Usually where the supply exceeds the demand, be it in the purchase and sale of commodities, or the employment of service, the question of lower cost considerations are immediately suggested. There are those who would negotiate professional service on the law of supply and demand. The educational leaders, however, will resist, and properly so, any attempts in that direction. They will come forward with a far more practical and acceptable plan—a plan which calls for higher professional standards with consequent improved service, rather than a tinkering with salary cuts.

The experienced school administrators know that every school system harbors those who are professionally weak, and who ought to be eliminated. He knows, too, that it is not an easy task to engage successfully in such elimination, whatever the urgency for a change may be. He knows, also, that it will be easier to adhere to standards in selecting new teachers than it will be in weeding out old ones.

The logic of the situation reduces itself to one of supply and demand on a service basis, rather than a money basis. If the American school authorities exact high class service, they must also stand ready to pay for such service. In the present instance it is safe to say that while there is no concerted effort in the direction of lower salaries in the school field, the tendency to exact the highest service, where an equitable salary is paid, can only be deemed a reasonable one.

The conditions which prevailed during the late war made for a lowering of standards. The schools had to be manned with a complete personnel and kept at a proper momentum. A teacher shortage was responsible for the employment with less preparation or ability than had been standard in the past. In the same degree a teacher surplus may be utilized to raise the standards of service.

## A SCIENTIFIC APPROACH TO SCHOOL BUDGET MAKING

The value of scientific budget making has been so completely demonstrated that there can no longer be any doubt. It is simply a method of applying the experience of the past to the future, and eliminating all waste. It lists the several needs under various headings and raises or lowers the figures in accordance with circumstances that attach to them, and the applied experience of a past day.

A well-planned budget not only permits a conclusion as to ultimate figures, but also permits a scrutiny of detailed items under the various classifications. It is here that the advantages of a detailed record come into play. The amount expended last year was so much. Was any part of it wasted? Can the present figure advantageously be increased or decreased?

The New York City board of education recently adopted a huge budget of \$108,157,399.36, which was subjected to the utmost scrutiny. While the increase of \$4,223,360.97 was based upon the extension of the senior and junior high schools, it also followed that every detailed item calling for the increase was enumerated. The more important decreases were \$234,748.55 on ordinary repairs to buildings, \$77,545 on fuel, \$9,480 on lecture fees, \$51,500.90 on evening elementary schools. In other words, the increases and decreases were figured down to the penny.

Scientific budget making, however, involves more than making additions and deductions on a previous year's expenditures. It must be the result of an intimate knowledge as to actual needs in the way of the salary schedules, but also in the direction of the needed equipment

and supplies. If a school makes a requisition for supplies, there should also be submitted an inventory of what is still on hand. Wasteful accumulations of supplies lodged in stock rooms and basements must be discountenanced. The budget maker brings to his service the judgment and counsel of all those who use the supplies, both as to quality and quantity.

No well organized school system, whether it be large or small, can afford to do without some well digested estimate and forecast as to the funds needed, and how these funds may most wisely be expended. A scientific approach to budget making is not only a protection against waste but a decided step in the direction of efficiency as well.

#### HOW SHALL SCHOOLHOUSES BE NAMED?

The custom of naming school buildings after persons who have rendered a distinguished service to the nation, the state or the community, is commendable. It not only commemorates great names in American history and exalts the worthy deeds of lesser lights, but also conveys worth-while lessons to the rising generation.

While the names of Washington, Lincoln, Jefferson, Jackson, Garfield, and Cleveland lead throughout the country at large, the newer school buildings bear the names of Roosevelt, Wilson, and Harding. The name of Roosevelt seems to be particularly popular at this time. The states whose sons have reached the distinction of chief executive of the nation usually honor their memory by naming their school-houses after them.

Thus, while the names of Washington, Jefferson, Madison, Monroe, Harrison, Tyler, and Taylor are popular in Virginia and throughout the south, the names of Grant, Hayes, Garfield, McKinley, and Harding are popular in Ohio and the northern states. While the name Lincoln is popular in all sections, it is more frequently applied to schoolhouses in Illinois than elsewhere.

The state of Massachusetts honors the names of John Quincy Adams and John Adams, North Carolina honors the memory of Jackson, Polk, and Johnson, and New York remembers with special care Van Buren, Fillmore, Cleveland, and Roosevelt as its favorite sons.

The tendency to honor the memory of men and women who have rendered notable service in a local way is finding more ready acceptance in recent years. The instances when those of lesser fame have set an example in laudable achievement are growing in number and in merit. The story of those who are making a splendid sacrifice of time, effort, and means in behalf of popular education is constantly coming to the surface.

There is no finer trait in human relations than that of gratitude for a great service well performed. To honor the memory of a school superintendent who has given the best portion of his life to a school system notes a wholesome local sentiment. To commemorate the services of a board of education president, or member, or teacher who has to his or her credit an unusual record for service, can only be deemed appropriate.

The names of local benefactors have in instances been perpetuated by attaching them to new school edifices because of a munificent money contribution. To honor the memory of such is most laudable, but it should also be remembered that the contribution rendered in self-sacrificing service may be equally valuable. Recently a schoolhouse in a New England town was given the name of a woman who had taught in the schools of that town loyally and efficiently for a half century. What a beautiful expression of appreciation and gratitude was here demonstrated!

The tendency to honor the memory of local persons who have made a notable contribution to the cause of human progress deserves encouragement. This does not imply that the memory of the nation's great heroes are to be ignored, but that benefactors whose services have been more immediate and concrete may impress a given lesson with exceptional force.

## THE MODERN HIGH SCHOOL AS AN ARCHITECTURAL ACHIEVEMENT

The foreigner who travels through this country with an eye to the physical evidence of American enterprise and constructive ability first marvels over the ponderous sky-scrapers met with in the larger cities. These huge structures, he believes, are indicative of the American spirit, namely the vision and energy of doing things on a large scale.

When this same traveler visits the smaller cities of the United States he will find fewer sky-scrapers, but instead will note dignified bank structures, stately office buildings, and modern factory plants. He will also find a public library, and a hospital or two, some beautiful churches and homes, all of which are pointed out to him by a constituency that is actuated by a feeling of local pride and patriotism.

But, another structure has been reared in American cities in recent years, which expresses in an eloquent manner the sense of local pride. This is the modern high school. Nor is this pride confined to the smaller comunity. New York City has brought the genius of the architect and engineer not only into its mammoth commercial structures, but its wonderful high schools as well. The New Yorker will tell of this or that high school in which the Georgian or Colonial style has found expression, or he can point out one in which breathes the Italian Lombard or the Italian Renaissance style.

In the smaller community, however, the high school looms up as the architectural gem which expresses in a more eloquent degree than any other the cultural aspirations of its people. The tremendous expansion of high school attendance in recent years has made larger buildings a necessity. But, the communities have not hesitated to give these larger buildings the touches of stateliness and refinement. Thus, where a community cannot point to a modern townhall or library building, it usually can point to a magnificent high school.

The cry of extravagance is sometimes raised. Surely, a stately high school ought not to be reared at the expense of the grade schools. Ample and convenient housing must be provided for all children. But, if the high school embodies something of artistic splendor, and thus expresses some of the finer aspirations of the community, it cannot be said that extravagance has been practiced. If the community stands ready to foster the ornate in architecture and thereby elevate the public taste, and can afford to do so, it is entirely within its rights.

In this connection it should be stated that school architecture has made great progress within the past two decades. The old time structure with its penderous towers and ugly roofs is a thing of the past. It has been superceded with a structure which is more simple in design and yet more graceful in its architectural outlines.

In interior arrangement and orientation they stand unsurpassed by any architecture known anywhere in any country. In point of equipment they embody everything worth while that science has contributed within the realm of housing.

Some of the high schools erected in recent years may well be compared with the architectural achievements of the old world. If they have become the pride of the communities that

have reared them it is not only because they constitute the best of local architecture, but also because that architecture is the best in the world.

## LARGE AND SMALL BOARDS OF EDUCATION

The size of boards of education is no longer a subject of debate among school administrators. That question was practically settled within the past twenty-five years. At one time the boards were large in membership, cumbersone in deliberation, political in tendency, and meddlesome in action. The model plan provides for small bodies, long tenure, and representation at large.

Whether the pendulum has swung too far from the large to the small board of education is a question however, which is occasionally raised. It has been suggested that the New York City board of education for instance, be increased from five to fifteen members. That city employs 30,000 teachers and provides for something like 1,000,000 children, and it was believed that the administrative burdens of an unsalaried body could better be borne by a larger personnel.

The number of persons that shall constitute a board of education primarily hinges upon the volume of school administrative business that is to be transacted. This volume increases with the size of the school population and the intensity of the school operations. Perhaps, it ought to be said here that the size of a board may depend somewhat upon the time, thought, and effort that citizens can reasonably be expected to devote to the public service.

The evils of an unwieldy administrative body have in the past been amply demonstrated. Yet it must be said that, with the reduction of the size of school boards, there has come also a clearer definition of the scope and function of such bodies and their relation to the other factors. The latter assume more of the purely executive labors, while the former deals more exclusively with the policies that shall control.

Thus, while the superintendent has become the strong factor in school administrative service the board of education has become no less so. The decisive power still lies with the latter.

The point to be made here is that with a clearer definition of the function of both, each has gained in efficiency. To clothe the superintendent with the power of initiative in all matters relating to the purely professional has given even the smaller school board a better control over the school system as a whole.

There is one other phase which enters into the subject of the size of boards of education, namely, the desirability of maintaining the representative character of such bodies. If a school system is an institution which must train for the citizenship of a self-governing people it should also observe the spirit which actuates the Republic. The board of education must be democratic in that its personnel must be truly representative, as well as reflect the better impulse of the community. While no one single member should represent a given class of people, the collective body should be representative of all classes.

Thus, the material size of a board of education must depend not only upon the size of the community, the volume of school administrative labors to be performed and the average inclination and ability to perform them properly, but also upon such members as may reasonably prove representative of an entire tax-paying constituency. Whether the number shall be five or fifteen or twenty-one must depend upon these considerations.

#### MEASURING THE SCHOOL PLANT OUTPUT

The educator who professionally weighs and measures the school output has come upon the

scene. He has invented methods and devices and tests whereby the output is to be stimulated, and the quantity and quality of the production is to be determined with a reasonable degree of accuracy.

This schoolmaster-expert may be likened to the efficiency man who has invaded the industrial and commercial field, engaged in short cut economies, and speeded up production for the purpose of showing a better balance sheet at the end of the year's business.

The measurements of the quantity production in both factory and school are readily made. The factory may readily measure results in dollars and cents, and the school output may be computed in student numbers. One is recorded in profits, the other in graduations.

The task, however, of determining the quality of the school output is involved and delicate. The quality of the factory output can be visualized and readily made ascertainable. But, the mental equipment which the school has transmitted to the student is subject to the quality test. Factory dollars are like all other dollars, but student mentality may vary all the way from gold nuggets to Russian rubles.

It has for years been the custom to estimate the per capita cost of school instruction. The newer and better way, no doubt, is to ascertain the educational earnings on the investment made in the school plant and the cost of maintenance.

The average school board member may not care to digest the scientific studies made in this field of endeavor, but he would do well to read the mental surveys and tests which are presented from time to time in popular form in the Journal.

The school official will come to an appreciation that to bring both the quantity and quality of school plant production to an ascertainable and fixed factor, is most desirable. Also that the educators who have turned their thought and attention to this task are to be lauded and encouraged into further progress and perfection.

#### WHAT'S RIGHT WITH THE SCHOOLS?

Under this caption a bulletin of the National Education Association discusses the country's ability to maintain the schools upon high standards of efficiency.

The marvellous progress made by the schools is demonstrated in figures which show that the increase in population from 1870 to 1922 was 183 per cent, and the number of school days provided has been increased by 461 per cent.

A most interesting chart is provided in showing the total national wealth, the average yearly income and the expenditures engaged in, including those for schools. The study concludes by saying:

"Notwithstanding the many good features of our education system, it has its weaknesses. Among the most noticeable are inadquate country schools and the low standard of qualifications for teachers that now exist. In some of the rural and sparsely populated regions, the people are still without adequate schools. Such a condition encourages illiteracy. Some of our teachers are without sufficient preparation for the intensive and diverse service required of them. The schools will more nearly approximate the complete fulfilment of their high mission when the teachers have higher qualifications. No person should be considered qualified to teach in our public schools unless, in addition to knowledge, training, and experience, he has an American background, the highest moral standards, a passion for service, and a full realization of the tremendous responsibility the position involves.

## The Excessive Cost of Transportation Under the Contract System

Harry E. Greene, Superintendent of Schools, Antonito, Colo.

The consolidated school of today needs efficient management. Since this type of school almost invariably makes transportation a necessity, and since the transportation cost is, next to teachers' salaries, the largest item in the budget, it can be seen that this is one place where efficiency is essential.

Every school board, where transportation is needed, has asked itself, "What is the best form for use in our school? Is the system we use the best one, or are we paying too much for the service we get?" The board is entrusted with the care of running the schools in the best manner possible, and it is in duty bound to give to the school patrons the most efficient form of transportation at the lowest possible cost.

The study reported here is based upon an investigation made by the writer, while a graduate student in the Department of School Administration at the Colorado State Teachers' College. The transportation systems in 92 schools of the state were studied. As these were in 28 counties and represented all forms of transportation, from the Ford touring car to the "school train" of Las Animas county, a fair estimate of the efficiency of the Colorado transportation systems was determined.

The Purpose of the Study
The purpose of the study was to determine
the relative efficiency of the two main forms of
transportation, namely, the district ownership
form and the contracting for the running of
busses by the district.

A comparison of the costs in 47 schools where the district-owned busses were used, with the cost in 37 schools where the busses were contracted for, shows a marked saving in favor of the district ownership plan. This has proven cheaper in both the irrigated districts and the sparsely settled dry land districts. The following shows the comparison of costs under the two systems:

	District	
Median Cost per Child	Ownership	Contract
	System	System
Irrigated districts	\$0.170	\$0.189
Dry land districts		0.470
Median cost per mile for so		
Irrigated districts		0.250
Dry land districts		0.175

Cost Figured Upon Contract Price
In the case of the districts which contract
for the use of the busses, the cost per child per
day, and the cost per mile, could be figured
directly upon the contract price. In the district ownership form many things had to be
considered, such as the running expenses,
drivers' salaries, depreciation on tires and cars,
repairs, insurance, and the summer overhauling.

In the dry land districts smaller busses are usually used, since route distances are greater and fewer pupils are carried on each route. This naturally makes the cost per child per day greater than it is in the irrigated districts, while the cost per mile is less than in the more densely populated districts. In each case, however, the ownership plan showed the lower figure.

Drivers who figure on using their cars for school transportation, always include an ample amount of depreciation, repairs, and general running expenses, besides the drivers' time. Much of this holds for the district-owned busses in the same way, but the district does not look upon bus operation as a money-making operation. The contract driver does, otherwise he would not consider spending his time in the transporting of pupils.

Transportation Under District Ownership Plan Practically all of the larger transportation systems of the state operate under the district ownership plan. The fifteen schools transporting the greatest number of pupils all do so in district-owned busses. In most of these systems a mechanic is employed to look after the care of the busses.

A majority of the schools transporting pupils continue in the form first adopted by the district. However, practically all schools which originally used horse-drawn wagons have now adopted the auto bus. Many school systems have changed from the contract to the district ownership plan, while others have sold their busses and contracted with individuals. It was found in the investigation that those schools which changed to the contract form, did so that they might avoid the immediate expense of purchasing new machines. On the other hand, schools which changed over to the district-owned cars did so in order to reduce costs, and to give greater control of the system to the educational

School Boys as Bus Drivers

In many of the schools of the state, school boys are employed as drivers. This is especially true in schools where the district owns the busses. The school boys receive a monthly salary of \$20 or \$25. The teachers who drive receive an additional salary of \$25 or \$35 a month, while men not otherwise connected with the school, receive salaries ranging from \$25 to \$100, with the median at \$40. A saving of at least \$15 a month can be made by the employment of school boys as drivers.

It is true there are objections to the use of pupil drivers. It is stated, for example, that boys do not have disciplinary control over pupils in the trucks, and that they do not have a knowledge of the mechanism of the machine, should anything go wrong on the road. Similar objections have likewise been made of the men who drive school cars. One superintendent in a school employing school boys, teachers, and outside men as drivers, stated that school boys were more dependable all around.

The advantages of student drivers far exceed the disadvantages. Always at school, ready to start out, under the close supervision and control of the superintendent and mechanic, and removable by them for negligence, the system is almost sure to work out satisfactorily. If the school has a good superintendent and a good mechanic, and wishes to save considerable of the expense of transportation, the advantages of school boys as drivers should be considered.

Recording the Costs of Transportation Systems
One of the principal causes of inefficiency in
transportation is the failure of superintendents
to keep accurate records of the costs of operation. Many school officials state they have no
knowledge of what the system costs them. In
many schools, the board handles the matter of
transportation, and the superintendent's interest in the matter is frequently limited to the
payment of the monthly bills.

It is only when superintendents realize that transportation efficiency is as much an objective in school administration as any other phase of their work, that we may attain a real reduction in the cost of transportation. When superintendents are given responsibility and control of the busses, and can effect revisions in the plan of organization, another step will be taken in the direction of transportation efficiency.

## A Study of Chicago School Finances

Chicago is exemplifying an old time pay-asyou-go policy in its school finances. Among the larger cities of the country it is the only one which has no bonded indebtedness running into the millions.

A study engaged in by Don C. Rogers, principal of the Smith School, Chicago, reveals the fact that while the average bonded indebtedness for school building purposes, in the larger cities runs into high figures, Chicago is indebted in a nominal sum only. He quotes the following comparative figures from the census report of 1923:

	Bonded	Indebtedness	for School
City			ng Purposes
Detroit			\$36,767,000
Cleveland			28,585,972
Philadelphia			28,587,000
Los Angeles			24.779.576
Pittsburgh			16.269,900
Boston			15,875,000
Buffalo			14.965,000
Baltimore			10,109,640
San Francisco			6,880,000
St. Louis	*******		3,000,000
CHICAGO			214,000

Mr. Rogers, in discussing school costs, points out that during the decade from 1914 to 1924 such costs have doubled in the United States. "Chicago is no exception to the rule," he says. "In 1914 the per pupil cost in Chicago was \$51.24; in 1924 the cost was \$100.70."

Reasons for Higher Costs

In explanation of the increased school costs, Mr. Rogers advances the following seven reasons:

1. The enormous increase in numbers of pupils has raised the school costs. In 1890 there were 8,000,000 children in school; in 1920 there were 16,000,000, (there are about 24,000,000 now). Much of the increase in enrollment has been due to an enkindled faith in the value of education. Part of it can be traced to compulsory attendance laws. In 1924, nineteen states had no compulsory attendance laws. By 1920, every state had them. Furthermore, the

age within which school attendance is compulsory has been advancing from 13-14 to 17-18; and the enforcement of these laws is more effective in recent years.

2. High school costs are two and a half times greater than elementary school costs, yet the greatest increases in school attendance have taken place in high school. In 1890 there were only three persons in high school for every 1,000 population; in 1920 there were 21 per 1,000 of population. In the city of Chicago, 12 persons per 1,000 of total population were found in high school in 1914; by 1924 the number had grown to 22 per 1,000—a growth almost twice as fast as the general population increase.

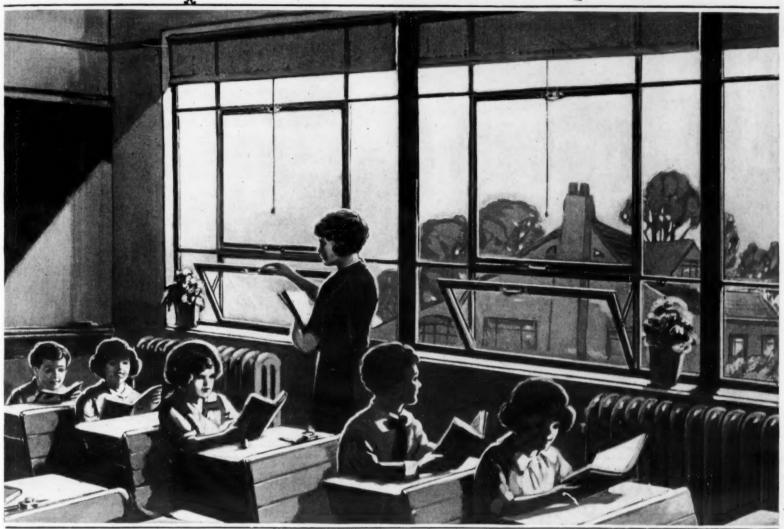
3. The holding power of the schools has increased. Students stay longer in school. In 1890 the average American had had 770 days of schooling; the average American of today has had 1,200 days' schooling. In Chicago, for every 100 children in the first grade, three more stay to graduate from high school today, than ten years ago.

4. The school curriculum has expanded. Children are given a physical care undreamed of in earlier days. Some of the increased school costs can be credited to the following: School doctor, school nurse, dental clinics, psychological clinics, open air schools, oral hygienics, supervised play, school movies, penny lunchrooms, special schools for deaf, blind, anaemic, crippled, delinquent, and subnormal children; truant officers, visiting teachers, kindergartens. Pressure from the public, through Parent-Teacher Associations and other civic groups, has largely been responsible for these items.

5. There has been a rise in the standards of teaching. Better training and successful experience now required of the teachers and principals, necessarily mean a larger salary. For-

(Continued on Page 148)

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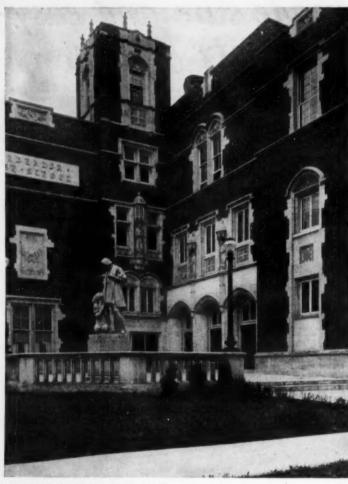
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Detail View, Alvernia High School, Chicago Brust & Phillipp, Architects

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School District Government

The state superintendent of public instruction had no authority to omit from the requisition blanks to school authorities any books under contract approved by the state board of education.—American Book Co., v. Marrs, 282 S. W. reporter, 568 Tex.

reporter, 568, Tex.

That parties to the contest of election to the board of directors of a school district consented to contest the court ordering a new election did not make a new election valid.—Leslie v. Barnes, 208 N. W. reporter, 725, Ia.

A school board could not give validity to an invalid election of directors by recognizing those chosen as directors.—Leslie v. Barnes, 208 N. W. chosen as directors.— reporter, 725, Ia.

An agreement between the members of school board, who were candidates for re-elec-tion, and their opponents, that the contest court might set aside an election and order a new one, is held not to estop them to deny the right of their opponents to appeal. (Ia. Code of 1924, §1145).—Leslie v. Barnes, 208 N. W. reporter,

The fact that a school board voted to construct The fact that a school board voted to construct a school building requiring an expenditure in excess of funds legally at its disposal for certain fiscal years, in the absence of a showing that such violations of statutory duty were willful or negligent, is held not to be a cause for removing the board from office. (W. Va. Code, c. 28a, §12).—Hamrick v. McCutcheon, 133 S. E. reporter, 127 W. Va.

School District Property

A school board can make a contract only when acting as a board, which requires that all members meet, or be given opportunity to do so by being notified.—Board of Education of Town of Carney v. News Dispatch Printing & Audit Co., 245 Pacific reporter, 884, Okla.

The concurring of a majority of the members of a board of school directors constitutes an action of the board in making a contract.—Board of Education of the Town of Carney v. News Dispatch Printing & Audit Co., 245 Pacific re-

Porter, 884, Okla.

A contract by the members of the school board, acting separately without a board meeting, is invalid and unenforceable.—Board of Education of the Town of Carney v. News Dispatch Printing & Audit Co., 245 Pacific reporter, 884, Okla.

Where a contract to build a schoolhouse did where a contract to build a schoolhouse did not require a contractor to pay for labor and material, and a bond was not conditioned for the payment of labor and material, the surety is held not liable to the laborers and material men, under C. S. §2445, prior to an amendment by the North Carolina public laws of 1923, c. 100, §1.

—Page Trust Co. v. Carolina Const. Co., 132 S. E. reporter, 804, N. C.

A statute providing that a public building contractor's bond is conclusively presumed conditioned for the payment of laborers and material men, is held not to affect a bond taken before a statute became effective. (C. S. 2445, as amended by the North Carolina laws of 1923, c. 100, §1).—Page Trust Co. v. Carolina Const. Co., 132 S. E. reporter, 804 N. C.

A contract made by the

A contract made by the members of a school board, acting separately without a board meeting, may be ratified by a board at a meeting by a majority of the members approving a contract.

Board of Education of Town of Carney v. News Dispatch Printing & Audit Co., 245 Pacific reporter, 884, Okla.

When a school board receives and retains the when a school board receives and retains the benefits of a contract made without a board meeting, it will be deemed to have ratified a contract, and is bound thereby.—Board of Education of Town of Carney v. News Dispatch Printing & Audit Co., 245 Pacific reporter, 884, Okla.

School District Taxation

That a notice of a proposed bond issue to the voters provided that the ballots should have written thereon for or against school bonds is held not to invalidate an election, notwithstanding an ordinance prescribing that they should bear words for or against public school bonds for a public schoolhouse.—Edwards v. City of Clarksville, 133 S. E. reporter, 45, Ga. App.

A petition for an election to authorize bonds in a district maintaining separate schools must

be signed by one-third of the qualified electors, or signed by one-third of the qualited electors,—including both white and colored electors.—(Okla. constitution, art. 13, §3; school law 1913, laws of 1913, c. 219, amending the revised laws of 1910, §7899; revised laws of 1910, 7836, and the comp. statutes of 1921, §10283.)—Koch v. Harris, 245 Pac. reporter, 848, Okla.

A school district bond election, held pursuant to an election not signed by one-third of the total number of the qualified electors residing in the district is void.—Oklahoma constitution, art. 13, \$3; school law of 1913 (laws of 1913, c. 219), amending the revised laws of 1910, §7899; revised laws of 1910, §7836), complete laws of 1921, \$10283).—Koch v. Harris, 245 Pac. reporter, 848, Okla porter, 848, Okla.

#### **Teachers**

A contract signed by two members of a school board with a teacher, resulting from an informal meeting of the directors without prior notice, is valid, and binds a district if duly approved by the county superintendent. (Comp. laws of 1921, \$10367.)—McCullough v. School Dist. Board No. 37, in Bryan County, 246 Pac. reporter, 462, Okla

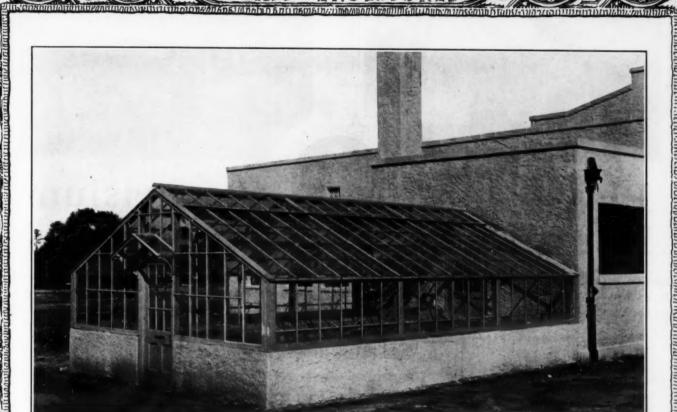
The acceptance of service as a superintendent of schools under an oral contract of employment for a portion of a term is held a ratification only as to such portion. (Crawford & Moses' Digest, §8917.)—Bald Knob Special School Dist. v. Mc-Donald, 283 S. W. reporter, 22, Ark.

Donald, 283 S. W. reporter, 22, Ark.

Pupils, and Conduct of Schools

The special regulations of a district board of a consolidated or union school district for transporting pupils to school, adopted with the approval of the county superintendent is conclusive, in the absence of bad faith or conduct so manifestly oppressive, discriminating, or unjust as to amount to bad faith. (Revised statutes 72—603.) Park v. McKinney, 245 Pac. reporter, 1021, 121 Kans. 41.

A complaint charging failure to send children to school, as required by the North Dakota statute, and alleging facts constituting an offense charging it to be contrary to the form of the statute, and against the peace and dignity of the statute, was sufficient, even though the specific statute mentioned in the forepart had been amended. (Comp. laws of 1913, § 1342, 10685, (Concluded on Page 74)



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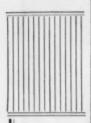
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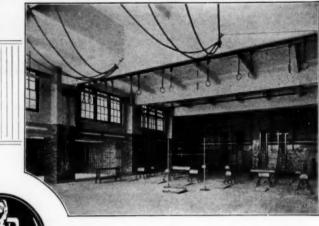
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(Concluded from Page 72)

10693; laws of 1915, c. 141; laws of 1917, c. 206.)
—State v. Kessel, 208 N. W. reporter, 845, N. D.
In prosecution for the violation of the compulsory school attendance law, allegations that the residence of the children in question was 2½ miles from school will be construed to mean 2½ miles by the peacest route. (Comp. laws. of miles from school will be construed to field 24 miles by the nearest route. (Comp. laws of 1913, \$1342, as amended by the N. D. laws of 1917, c. 206.)—State v. Kessel, 208 N. W. reporter, 845, N. D.

In excluding children from school for religious In excluding children from school for religious instruction, consideration may be given to propositions that the parent has the right to direct the training and nurture of the child, that obligations and citizenship require the fostering of moral and religious qualities, that the right of the state to enforce school attendance does not mean that education must be standardized, and that regulation does not create a union between that regulation does not create a union between the church and the state, or teach sectarianism, or invade religious freedom. (N. Y. Education Law, §623, as amended by the laws of 1917, c. 563.)—People ex rel. Lewis v. Graves, 215 N. Y. S. 632, 127 Misc. reporter, 135, N. Y. Sup.

Excusing children from the public schools for religious instruction a half hour weekly is held religious instruction a half hour weekly is held lawful exercise of the school board's discretion. (Education law, §§ 94, 96, 632, 636; sections 620 c. 386; section 623, as amended by the laws of and 621, as amended by the N. Y. laws of 1921, 1917, c. 563; section 868, as added by the laws of 1917, c. 786.—People ex rel. Lewis v. Graves, 215 N. Y. S. 632, 127 Misc. reporter, 135, N. Y. Sup.

#### LAW AND LEGISLATION

—At Seneca, N. Y., the school board received bids for an electric oven but disregarded the lowest bid. The matter was carried into the courts and the New York state supreme court has ordered the board to show cause why the cheaper oven was not bought. cheaper oven was not bought.

—A case was recently decided by the supreme court of New Hampshire in which the question of civil liability for dismissing a pupil where a board of education acts within its authority, though with malice, was raised. The court held that the board was not liable and in its opinion said: "The school board had general jurisdiction to dismiss. The general right and authority of

dismissal was vested in them, and their exercise dismissal was vested in them, and their exercise of it was not an unwarranted act of assumed power, but merely an erroneous exercise of actual power, for which liability does not attach. The dismissal was a decision of a case between the plaintiff and the school district, which the board was the only constituted tribunal to determine. The judgment was not a nullity."

#### RECOGNIZING SCHOOL BOARDS

"In these days when we are scrutinizing the cost of all our public institutions it is well to call attention to one feature of the public school system that is receiving scent recognition" said system that is receiving scant recognition," said Francis G. Blair, State Superintendent of Instruction for Illinois, and president of the National Education Association, "namely, the gratuitous services rendered by boards of educa-

"Many people do not realize," he says, "that there are about 45,000 men and women who are serving on our boards of education, boards of di-rectors and boards of trustees without any cost

### MASS PRODUCTION AND EDUCATION

MASS PRODUCTION AND EDUCATION
One of the most important phenomena of modern industry is mass production, and the standardization of product. To what extent is school procedure influenced by this dominant practice in industry? Undoubtedly to too great an extent. Mass production and standardization in manufacturing speed up the process. In education standardization and mass instruction do likewise. They speed up the process, in that they make the wheels go round faster; but in this respect education is different from manufacturing. Speeding up in manufacturing wears out spect education is different from manufacturing. Speeding up in manufacturing wears out machinery; but speeding up in education results in the agitation, excitement, and destruction of human nerves. These cannot be repaired with a screwdriver and a hammer. Good teaching can be done only in an atmosphere of calmness and deliberation. In another respect manufacturing and education are alike. In education, as well as in manufacturing, standardization and mass production cheapen the product. In manufacturing the product is cheapened in both price and quality; but in education it is cheapened only in quality.—Edwin C. Broome, Supt. of Schools, Philadelphia. Philadelphia.

to the district, the county, or the state. The public school organization in its main adminis-trative phases is under the control of a board of education or a board of directors elected by the people.

"These boards are made up of professional men, business men, farmers, laboring men, rep-resenting to a high degree the social and eco-nomic character of the community. They attend a meeting usually once a month and are under requirement of law to visit the schools each year. It is impossible to compute the service which some of these board members render to

which some of these board members render we the cause of public education.

"There are of course now and then men and women elected to the boards who give little or no time or energy to the work, but the great majority render effective, conscientious, devoted service. It is one of the most promising things in our democratic form of government that citizens are chosen for such duties from among zens are chosen for such duties from among their fellows in over 11,000 school districts of

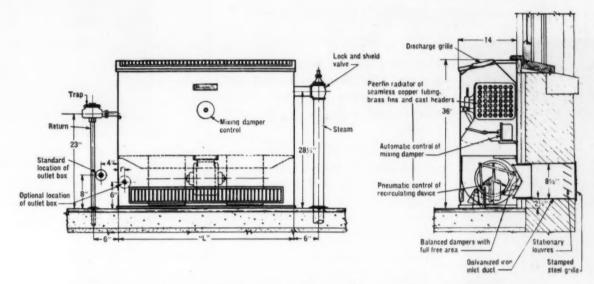
"But one of the most disappointing aspects is that so little recognition is given to these men and women who give their time and abilities to such a public cause.
"It is one of the

"It is one of the main sources of strength of the public school system that its affairs are managed by boards of business men and women whose practical judgments are needed to keep the theories of public education hitched to the wagon of practical life and practical demands.
"If we are to continue to secure a high grade

"If we are to continue to secure a high grade of men and women who will render a high grade of service, we ought to find some more effective way of showing our appreciation for their efforts and sacrifices." and sacrifices.

—In preparing its budget for 1927, the Kansas City, Kans., board of education is making an effort to cut down the figures. Last year the rate was \$1.60 on the \$100 valuation.

—Racine, Wis. Following a recent survey of the school system, it has been recommended that the school board adopt a definite policy in the matter of taking the school census and keeping the census records. The report recommends the use of a card index system to be kept in the central effect of the school system. tral office of the school system.



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"I consider that they are at all times a little in advance with improvements."

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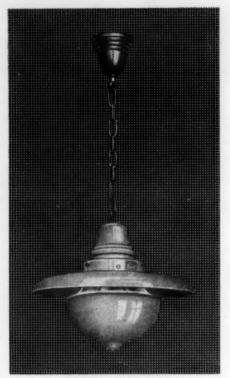
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Hundreds of grade schools, high schools, and colleges have installed Denzar to light their colleges have installed Denzar to light their class rooms, study rooms, gymnasiums, laboratories, manual training and domestic science rooms, auditoriums, and offices. Contact with so many of these installations has given Beardslee engineers a wide experience in school illumination and has made available a wealth of information on the subject. Any school board, superintendent, architect, or electrical contractor interested in better school lighting may have this information for the asking. information for the asking.

# BEARDSLEE CHANDELIER MFG. CO.

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A recent decision of the Supreme Court of Michigan holds that school boards have no auto rent additional rooms or buildings for school purposes. They may, however, establish and provide for the operation of additional grades in a primary school district.

grades in a primary school district.

The case arose in Fremont Township, Dist. No. 7, in Isabella County, where the board had been notified it must have a third teacher in order to receive the proper credits. The board provided a third teacher, but in doing so established another grade and rented additional building facilities. The court held that additional facilities for school purposes may only be lawfully authorized and rented by vote of the people.

-Stuart, Fla. The school board has established a book store in the basement of the high school. All purchases are cash to eliminate the keeping of books and the collection of small

-Chicago, Ill. Twenty-five projects of various types, many of them national and interous types, many of them national and international in scope, were refused entrance into the public schools the last year by Supt. William McAndrew and the board of education. The action received the approval of the teaching staff and was given some attention in the annual report of the superintendent.

Under the rules, the schools are permitted to participate in the School Children's Aid Society work, the Red Cross fund, hospital Christmas presents, Washington's birthday, Near East Represents, Washington's birthday, Near East lief, and the Boy Scouts and Campfire work.

Among the requests of the year declined by the school authorities were: Boys' week, girls' week, music week, mothers' day, fathers' day, Monticello purchase, old ironsides collection, survey of twins, apple week, leather week, business show, thrift week, book week, and constitution week.

-The school board of Beaumont Tex., is contemplating a survey of the school system. The

survey is to be thorough and impartial, and is to be conducted by experienced schoolmen.

—Decatur, Ill. The school board is considering a rule which would provide that no more married women be employed.

Under a new rule of the school board of La-Grange, Ind., children who will be six years of age on or before the first day of January, 1927, will be eligible to enter the first grade.

—An experienced dietitian has been employed by the school board of Dallas, Tex. The dietitian will have in charge the planning of lunches for

by the school board of Dallas, Tex. The dietitian will have in charge the planning of lunches for the 42 school lunchrooms. The lunchrooms did a business of \$400,000 during the last year.

—Joplin, Mo. The school board has made a change in its by-laws governing the payment of tuition by non-resident pupils. Under the new rules, all tuition of non-resident pupils must be paid in advance. Non-residents who have children attending the schools will be given credit for all school taxes paid in the school district. Such credit will be paid upon the presentation of tax receipts, or upon evidence that a school tax has been paid to the district treasurer.

The change in the rules is the result of an in-

The change in the rules is the result of an injunction suit brought against the board last winter. The board issued orders against the return to school of five children after the parent had claimed exemption from tuition, stating that

had claimed exemption from tuition, stating that he had paid taxes in the school district.

—Bradenton, Fla. Separation of the city and county school systems for the purpose of improving the financial and administrative departments has been recommended in a report of the school facilities committee to the local chamber of commerce. It was urged that the officials of the schools be relieved of political influences in holding the positions, and that the qualifications be placed under an educational and moral ability standard.

—Neponset, Ill. The school board has an-

-Neponset, Ill. The school board has announced that it will sell books to the students at cost. Hereafter, the books will be sold directly from the school building, and not by local dealers as in the past. Under the rule, high school books will continue to be sold by local dealers, with ten per cent added to the cost of the books.

-Springfield, Ill. The location of new boundaries for the various schools, and the prepara-tion of a map showing the new districting plan has been completed by the board of education.

The plan has the advantages of better and more adequate housing for the pupils, and more attention to the welfare of the individual pupil. An equalization of pupils to teacher will bring the

equalization of pupils to teacher will bring the average down to 35 pupils.

—Suit has been filed in the Circuit Court of Astoria, Ore., by James L. Hope, an attorney, on behalf of himself as a taxpayer, asking that the school board be enjoined from paying E. E. Gray and A. W. Norblad, members of the board, for service rendered as attorneys. Mr. Hope alleged that the members were to receive \$500 each from the school district for legal fees, and that a similar sum was to be paid to G. C. and A. C.

a similar sum was to be paid to G. C. and A. C. Fulton for services in the same case.

—San Antonio, Tex. A survey of the building needs of the school system will be made with a view of determining the need for a school bond issue.

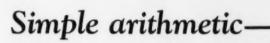
Aurora, Ill. The east side school for the —Aurora, Ill. The east side school for the deaf may be discontinued in the near future, unless additional pupils are enrolled, according to Supt. C. M. Bardwell. The school has been in existence for twenty years. Out of the present class of eleven members, all of four have completed the work of the school. The school district receives \$1,200 from the state to carry on the work which has been complemented by found

the work which has been supplemented by funds from the district.

—Bloomfield, Conn. A change in the present membership of the school board is contemplated with the election of the new board in October. Under the plan, the board will be increased to be a contemplated with the contemplated with the election of the new board in October. six members, two members to be elected each year, and to serve for a term of three years. Under the former plan, an entire new board was often elected in October, and the new body became handicapped because they were compelled to follow the plans prepared by their predecessors.

—Decatur, Ill. A new rule governing attendance of children in the public schools has become effective with the opening of the schools. Under the rule, a child who is 6 years of age on or before September 7th will be admitted to the schools in September.

A child who becomes 6 years of age after September 7th, and before March 1, 1927, will be permitted to begin school at the opening of the second semester.



Multiply the number of pupils attending your school by one hundred and fifty. Result: the approximate number of footsteps that tramp noisily up and down the corridors of your building every day.

Multiply this figure by the number of days in the school year and you have a total of mammoth proportions.

Conclusion: school corridors and classrooms demand floors of proved durability and quiet; floors such as *Gold Seal Battle*ship Linoleum. In hundreds of fine school buildings this noise-absorbing school floor has fully demonstrated its ability to withstand constant heavy traffic.

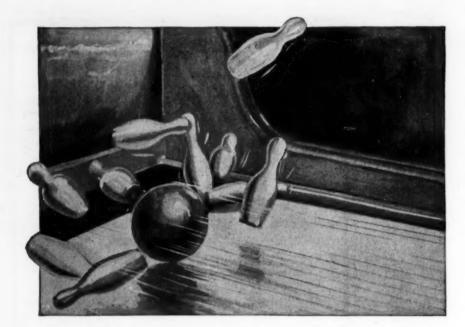
And—"to make assurance double-sure"—with every Gold Seal Battleship Linoleum floor installed according to Bonded Floors specifications is obtainable a Guaranty Bond against repair expense (issued by U.S. Fidelity and Guaranty Co.).

Let us tell you more about the BONDED FLOORS modern methods that assure permanent floors at no sacrifice of economy and comfort.

BONDED FLOORS COMPANY, INC.

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BONDED FLOORS
Resilient Floors
For Every Need



# How ten pins help you choose a floor

Have you ever heard the crash and felt the shock of the ball as it strikes the ten pins, when you were passing a bowling alley? That ball goes charging down a polished floor and hits the pins with a tremendous impact.

Think what destructive treatment those pins have to resist. The ball knocks them-they knock each other —they fly in every direction, only to be set up and struck again.

It takes a remarkable wood to withstand such treatment. It must be hard to split, hard to splinter, hard even to dent by blow on blow.

That's why ten pins as well as the floors of bowling alleys are made of Maple. This tough-fibred, heavy, closeknit wood is found wherever brutal treatment demands the best.

You get these same advantages in Maple Flooring. And in schoolrooms, floors are put to the hardest test. Scraping feet—shuffling shoes—the tramp of hundreds of youngsters, in and out day after day, will quickly wear away any

floor but the one which has the greatest resistance.

Floor with Maple, Beech or Birch. All three flooring woods are distinguished by the same characteristics close, compact graining; freedom from splinters; resistance to wear; cleanliness; and the ability to polish with use. Of course, such flooring provides firm, permanent anchorage for desks.

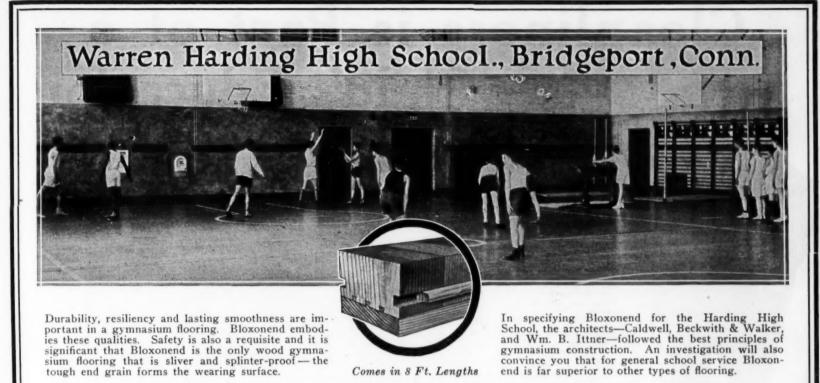
Floors of Maple, Beech and Birch are also used for beauty. In your home, or in those rooms of the school which need a home atmosphere, you can have the decorative possibilities illustrated in the booklet, "Color Harmony in Floors." Ask your retail lumber dealer for a copy, or write us and receive one with our compliments.

MAPLE FLOORING MANUFACTURERS ASSOCIATION 1061 Stock Exchange Building, Chicago

#### -Guaranteed Floorings

The letters MFMA on Maple, Beech or Birch Flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and

# Floor with Maple Beech or Birch



Write for Descriptive Booklet "A" and sample.

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639 Howard St.

(Continued from Page 76)

-White Plains, N. Y. The board of education has lost its two-year fight to remove William Maxwell as a principal in the grade schools. During the past year Mr. Maxwell came to the Court Street School every day despite the fact that he had neither pupils nor teachers.

The classes of the Court Street School were transferred a year ago to another building, and teachers and pupils went without their principal. His name was not included in the transfer. The decision of the State Education Board gives him the right to be principal in the grade schools, with all back pay due him, but denies his petition to be made a high school principal.

decision of the State Education Board gives him the right to be principal in the grade schools, with all back pay due him, but denies his petition to be made a high school principal.

—The board of education at Bridgeton, N. J., recently sent the large bell in the high school belfry to the Sesqui-Centennial at Philadelphia, Pa. The bell was rung on Independence Day, 1776, and was at that time in the belfry of the Bridgeton court house.

—The board of education at Bridgeton, N. J., has equipped the social studies classrooms in the junior high school with chairs and tables in place of the usual desks and seats.

—An enrollment of 900 pupils is expected in the high school at Bridgeton, N. J., with the opening of the schools. This enrollment is the maximum capacity of the building.

-A complete cafeteria equipment has been installed in the high school at Bridgeton, N. J.

—John A. Hardiman resigned from the whitesboro, N. Y., board of education because he claimed "there was too much quack politics and shysterism" in that body. President Fred J. Sisson resented the offensive terms and explained that Hardiman had resigned because he could not have things his own way. Frank L. Eberley has been chosen to succeed Hardiman.

At the Columbia County school board convention held at Portage, Wis., Miss Anna R. Nelson, superintendent, deplored the fact that the school term had been cut from nine to eight months. In speaking of the total days of absence recorded for the county last year, which reached 36.885½ days, Miss Nelson ascribed illness, bad roads, inclement weather, and the need of help at home as the reasons, remarking that

the pupil who misses school retards the progress of himself and of the class as well. Miss Mary F. Cushman, member of the educational board, explained the method of election of the committee handling the matter of adoption of uniform books throughout the country schools. M. C. Palmer of Columbus in speaking of necessary qualifications for adequate teachers pointed out that sympathy, personal appearance, address, sincerity, optimism, enthusiasm, scholarship, vitality, fairness, and reserve, all made for success.

—The department of rural education of the Kansas State Teachers' College has issued a score card by which the eligibility of candidates for school boards are to be measured. It provides that such candidates should have a good common school education, own their homes, read a standard farm paper and at least one magazine of recognized worth, be in favor of spending money for well-trained and efficient teachers and of retaining such teachers once they have been found, and should have expressed themselves as believing that rural school boys and girls should have as good buildings and equipment, as well prepared and efficient teachers, as good supervision of instruction as city boys and girls. Other desirable qualifications are enumerated.

Other desirable qualifications are enumerated.

—The board of education of Omaha, Nebr., has wrestled for several months with the problem of securing a business manager. The Omaha World Herald in comment on the subject says: "The chief obstacle in the efforts to secure a real business manager for the schools is that the necessity of engaging a real manager, and equipping him with adequate powers, is not yet apparent to some of the board members. Disappointment is bound to follow the selection of any man who is given a subordinate position, who must cater to the superintendent in charge of educational matters, and who will be merely a glorified clerk. And the man selected must be qualified to accept the responsibility. He will have an opportunity for a showing in a single year to convince the taxpayers that a step in advance has been made in school management. But he must be of sufficient caliber to measure up to the opportunity."

-Carl A. Myers, who is a member of the Dayton, Ohio, board of education, and whose term extends to 1930, has been nominated for county auditor on the Republican ticket. It is held by his friends that he can hold both offices, but Mrs. Ola Gunckel, deputy state auditor, holds that "the two positions are incompatible. Myers could not hold them both if a single person made objection. As county auditor Myers would have charge of the collection and distribution of the taxes from the board district and would be in a position to favor the board if he cared to, also to oppose its actions if he cared to do that. While there are some elective positions, even those not strictly party places such as membership on party committees and the like, that Myers could legally hold at the same time he was auditor, that of a member of the board is not one of them."

—Otis Freese, member of the Edinburg, In-

—Otis Freese, member of the Edinburg, Indiana, school board, resigned because he was not elected to the presidency to which he was entitled by seniority. The common council has selected A. M. Canter as his successor. W. D. Pritchard was elected president of the board.

—The school board convention, held at Ellsworth, Wis., was attended by 174 board members, 40 teachers, and 65 visitors. George Dick of the state department, conducted the meeting. Dr. Bowen, also of the state department, spoke on the prevention of disease. The county superintendent announced that \$500 had been appropriated to fight the goiter situation in Pierce county.

—More than fifty members of school boards in mining districts appeared before the state executive council of the state of Iowa to present claims in connection with the apportionment of financial aid from the state. The meeting proved a stormy one, inasmuch as it was contended by the council that the law contemplated the \$50,000 fund in aid of rural mining schools only. The school board members represented mining towns and villages.

—When the board of education of New Roch.

—When the board of education of New Rochelle, N. Y., changed the name of the \$1,200,000 Woodrow Wilson Memorial high school to the New Rochelle high school, the local civic and commercial organization protested. It was set forth that the town had been severely criticized by the outside world. The board of education has concluded to stand pat on the decision.

# Cleanliness is Part of a Child's Education

Users of the FINNELL Electric Floor Machin Electric Floor Machine
University of Nebraska,
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Ann Arbor, Mich.
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Lincoin, Nebr.
Board of Education,
Middletown, Uhio
Yale University,
New Haven, Com.
Board of Education,
Elizabeth, N. J.
Board of Education,
Pawtucket, R. I.
Board of Education,
Oakland, Calif.
Passet of Education,
Oakland, Calif. Pawtucket, R. I.
Board of Education,
Oakland, Calif.
Board of Education,
Mt. Clemens, Mich.
University of Kentucky.
Lexington, Ky.
State Normal School.
Pottsdam, N. Y.
Independent School District,
Buhl, Minn.
American School for Deaf,
Hartford, Conn.
Moler System of Colleges,
St. Louis and Chicago
Cornell University,
Ithaca, N. Y.
Board of Education,
Fort Worth, Tex.
Consolidated Schools,
New Britain, Conn.
University of California,
Berkeley, Calif.
Bethlehem School District,
Bethlehem School District,

School boards realize that children will not learn to be clean merely by being taught it. The entire school-especially the floors-from the classrooms and halls to the laboratories and cloak rooms, must be kept spotless.

There is one sure way to clean floors of all kinds—the electric way. The FINNELL Electric Floor Machine has solved the problem. Laboratory stains, charcoal dust and bits of rubbish, which gather in cracks and crevices of school rooms and refuse to come out with ordinary brushing and mopping, cannot resist the FINNELL

The FINNELL scrubs with 4 to 8 times the brush surface of the single brush used by hand. It exerts 15 to 20 times the force, thus getting all the dirt out. It covers 10 to 20 times as much floor space per hour as the strongest man could possibly scrub by hand, making it both a time and money-saver.

Write for free booklet "Your Questions Answered by Users."

### FINNELL SYSTEM, Inc.

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Hannibal, Missouri

DISTRICT OFFICES IN PRINCIPAL CITIES

Floor Machine Headquarters for Twenty Years

ELECTRIC FLOOR MACHINE

It Waxes It Polishes It Sands It Scrubs

-The board of education and the superintendent of schools at Freeport, Ill., are housed in new offices in the former high school building. The new quarters provide a large, airy room for the superintendent and also a suitable room for the meetings of the board.

—Oklahoma City, Okla. A daily express and mail service will be maintained this year for all of the 47 public schools of the city. A truck and driver have been secured to carry mail and supplies to the several schools.

—Jefferson, Tex. Non-resident students of the high school will be charged tuition of \$3 per month; non-resident grade pupils will be charged \$2, and under-age pupils \$1.50 per

—New Haven, Conn. The school board has awarded a contract for 1,100 tons of buckwheat coal, at \$5.64 a ton.

-Muncie, Ind. The school board has abolished the position of superintendent of buildings and grounds. The step was taken in line with an economy program in connection with a reduced school levy.

—Providence, R. I. Juvenile traffic patrols will safeguard children going to and from the city schools under a plan proposed by the Providence Safety Council. The Junior safety patrols are to be introduced as part of the junior safety council's work in safety education, the safety council's work in safety education, the safety of children killed in street segridents have number of children killed in street accidents has been reduced from eighteen to six.

-Under a court order, county boards of education in Kentucky must support the colored schools until the constitutionality of the Berry act has been decided. The decision overrules a motion of the Fleming County board of education to dissolve an injunction granted by the Circuit Court of Maysville, requiring the board to establish and maintain colored schools in the county. in the county.

-Youngstown, O. The school board has passed a resolution submitting to the people an extra levy of 3.6 mills for school purposes for not more than five years, beginning with 1928.

-Lafayette, Ind. The school board has adopted a budget of \$366,000 and a tax levy of \$1.02.

-Cedar Rapids, Ia. The school board has placed on sale refunding school bonds amounting to \$300,000, with refunding dates starting in 1927 and continuing until 1946.

-Lawrence, Kans. The school board has asked the citizens to approve a tax of two mills, in addition to the present levy, for the erection of a sixteen-room school.

The school board of North Providence, R. will take immediate action toward the repair of alleged unsafe fire escapes. The action

followed a protest of citizens relative to the condition of the fire escapes.

—A survey conducted by the United States Health Service at Cincinnati, Ohio, brings out the fact that enlarged goiters, decayed teeth, and enlarged tonsils do not affect the intelligence of children to any marked degree. More than 3,790 children in the sixth grade were tested during the course of the experiment. It was found that, although children with enlarged goiters failed to show signs of lower intelligence, that those with enlarged goiters, the small percentage of children with very marked thyroid enlargements were apparently slightly less intelligent on the average than those with normal or slightly enlarged thyroids.



CHEER OPENING OF SCHOOL

Above shows a group of happy school kiddies cheering the opening of Public School No. 114, New York City.



How much will you have paid for your floor?

WAXING ... polishing ... cleansing ... repairs ... maintenance is as much a part of the cost of a floor as the initial expense.

With floors of Stedman Reinforced Rubber, there is no upkeep expense . . . proper washing is the only care necessary—and years of the hardest kind of wear fail to indicate the probable life of a Stedman floor.

A Stedman floor in your corridor, school or assembly rooms may cost a trifle more the first year, but five . . ten . . fifteen years hence, it will prove a real floor economy.

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Typical Stedman Floor Installations

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RUBBER FLOORING REINFORCED

# ACCURACY & DURABILITY

Are Essential in School Work and CONTINENTAL SCALES are Designed and Constructed to Meet These Exacting Demands



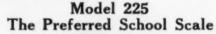
### Model 526 Portable Scale

The lightest weight scale made. Designed for the traveling nurse. From the handy carrying case, set up, ready for use, in less than two minutes. Finish in natural aluminum. Full capacity beam 240 ands by 1 ounce graduations.



#### Model 313 Stork Scale.

Latest design offers a rigid affording a convenient rack for weights. Tare beam enables you to read infants' weight direct from the nickeled beam. Finished in oven baked, white or ivory enamel. Graduated by ¼ ounces





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## Model 524 Clinic Scale

An extremely accurate scale of the highest quality for clinical use where a large number of grown chil-dren as well as infants are weighed daily. Equipped with tare poise and removable tray. Finished in oven baked enamel with nickel plated brass beam. Weighs accurately to 105 pounds by 1/4 ounce.



### Model 100 Health-O-Meter

Where space is limited and fractional pound graduations are not required. Compact design and sturdy construction assure long life. and sturdy construction assure long life.

Large open face dial registers clearly to 250 pounds by 1 pound. Finished in oven baked white enamel. Five year guarantee accompanies each scale.

# S BUILDING NEWS S OF THE SCHOOLS

# NEW YORK CITY SCHOOLS HAVE HIGH VALUATION

NEW YORK CITY SCHOOLS HAVE HIGH VALUATION

—The value of the school property, sites, buildings, and equipment, the possession of the New York City school system, has trebled during the last two decades, according to statistics of the board of education. In 1906 the value of the school property was \$99,712,772. Since that time, the value of additional requirements each year has averaged \$10,452,921, until at the end of twenty years, the total value of the board's property is \$318,771,208.

The greatest increase in school property value was in the years 1923, 1924, and 1925, although since the war, there has been a constant increase in the valuation from 1.4 per cent until 1924, when it reached its acme of 27.5 per cent. In 1923, the valuation totaled \$216,125,375, or an increase of 11.17 per cent over the preceding year. In 1925 the valuation had increased to more than a billion dollars.

Of the \$318,771,208 at which the school board estimated the value of its possessions at the end of the year 1925, over \$50,000,000 is represented by sites, the remainder consisting of buildings and equipment.

Buildings owned by the city and used exclu-

equipment. and equipment.

Buildings owned by the city and used exclusively for school purposes, exclusive of those for administrative needs and storehouses, number 820 for the year ending 1925. This is an increase of 37 buildings over the preceding year, and an increase of 73 over the year 1923.

In addition to the buildings devoted to school purposes, the board of education has eleven more

In addition to the buildings devoted to school purposes, the board of education has eleven more which are used for the sole purpose of carrying on the administrative end of the school system. There are also 134 more buildings loaned or leased for the purpose of providing instruction, and 101 other locations which are given over to instructional purposes. In buildings owned and leased by the board, 1,017,796 sittings are provided by 954 schools. The Borough of Brooklyn provides the largest number of sittings, a total of 388,003 of the five boroughs.

#### BUILDING NEWS

-Pekin, Ill. The building committee of the school board has reported substantial savings in insurance premiums through a reduction in the amount of insurance, and a reduction in the number of agencies with which the insurance was placed. The amount of the insurance has been reduced from \$332,000 to approximately

been reduced from \$332,000 to approximately half of that amount.

—Wichita, Kans. A controversy has arisen in the board of education over the proposal to vote on a bond issue of \$300,000 for new high school sites. The building and grounds committee initiated and supported a recommendation for a bond issue, but later opposition of the strongest kind developed.

kind developed.

It appears that a ten-year building program, proposed by Dean Frank A. Neff, president of the board, was adopted by that body last spring. the board, was adopted by that body last spring. The new program provides for new buildings and for the operation of the schools at their present state of efficiency, without an increase in taxes and without a bond issue.

—Iowa City, Ia. The name "Lincoln" has been selected by the school board for a new grade school. The name was the choice of a grade school. The name was the choice of the propole living in that part of the

grade school. The name was the choice of a majority of the people living in that part of the city from which the school draws its patronage.

—Cleveland, O. Standard building plans for all future junior high schools has been proposed by G. M. Hopkinson, architect-commissioner of housing for the board of education. The first building to be erected under the new plan will be the Alexander Hamilton School, which will accommodate 1,278 pupils. Plans are also in process for the John Hay Commercial High School and the Boys' High School. The new plan is expected to materially reduce the school building costs in the city.

—County school boards in Illinois have to a

-County school boards in Illinois have to a large extent complied with the requirements of the state fire marshal relative to the fire pro-tection laws. The rules require that each rural school must have two separate exits leading di-rectly to the outside of the building. These doors must swing outward, and be equipped with panicproof bolts. Hinge wire guards must be placed on the windows so that they may be opened from the inside. Schools must have fire drills and practice of them must be a part of the school course. In addition, each school must

have at least one approved non-freezing fire extinguisher.

-Youngstown, O. Under the building sched-—Youngstown, O. Under the building schedule, which is valid for four years, only one grade school building is contemplated in 1927. This building will have from 24 to 32 rooms and will cost \$300,000. The school board has more than \$700,000 remaining in the school building fund for the next year.

—Indianapolis, Ind. A new school building policy has been proposed by the board of education to bring about the elimination of portable buildings and to improve the general school housing conditions. The plan calls for the erection of schools with a larger capacity than the survey shows is needed at present, in order to allow for a probable increase in school population.

Business Director U. M. Frazer, speaking on the subject, declared that the erection of larger the subject, declared that the erection of larger structures would in time solve the school housing conditions. Instead of building eight-room schools in growing neighborhoods, twelve-room schools should be erected. Where twelve-room schools have seemed sufficient, sixteen rooms should be provided in the future.

The new policy will be carried out as far as possible in the budget now being drawn. A building appropriation of \$710,000 has been included for this purpose.

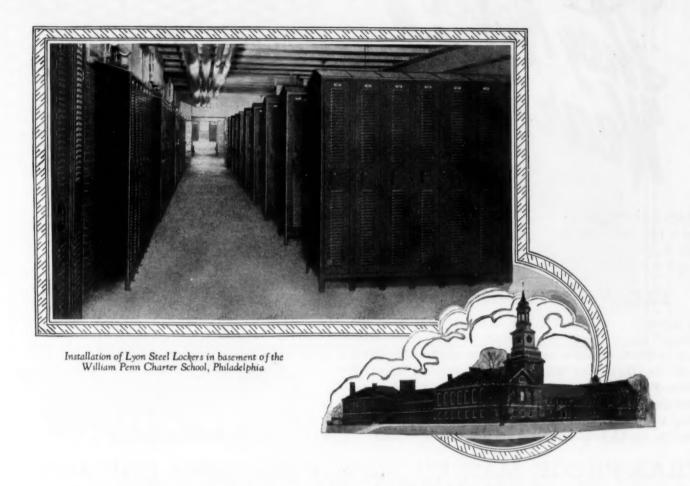
—Protest against the approval of \$30,000 in

—Protest against the approval of \$30,000 in bonds of school district No. 24, Okfuskee County, Okla., has been filed with the attorney general. Taxpayers of the district allege that bonds had been carried illegally, and action on the bond issue has been held in abeyance until the matter is settled.

Vidalia, La. The Concordia Parish school board has erected a high school and a six-room school for colored pupils; the old high school will be remodeled for the use of the elementary grades. The work was carried out at a cost of \$76,000.

—Cleveland, O. Three new schools, erected at a cost of \$2,600,000, were occupied in September. The Collinwood high school, which houses 3,500 students, is the largest in the city and cost \$2,500,000. The Alcott grade school, which houses 160 children, was erected at a cost of (Continued on Page 84)

### LYON STEEL LOCKERS



# AN OLD SCHOOL BROUGHT UP TO DATE

school in Philadelphia which is today still known as the William Penn Charter School. Not until 1925, were the original buildings in the center of the city abandoned for this beautiful modern stone building in a suburb.

Penn built well, and the tradition is upheld in this new building and in its equipment. Here, as in so many fine school buildings, the selection of lockers for cloak rooms and gymnasium fell naturally upon Lyon Steel Lockers.

Lyon Steel Lockers are as permanent

In 1689, William Penn founded a a part of a building as its walls. The strong frames keep them in alignment. The rugged doors do not sag or jam. The finish is pleasing and lasting. Lyon Steel Lockers stand the rough use of thoughtless schoolboys.

> With such durability there is economy - always a consideration in school management.

> In your corridors and locker rooms use Lyon Steel Lockers. Out of a nation-wide experience in equipping schools, we will gladly help you with your plans. Write us about your school and your needs.

# Lyon Metallic Manufacturing Company

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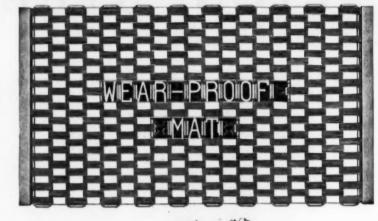
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DITTSBURGH 437 Smithfield St. ROCHESTER PHILADELPHIA 61 South Avenue 121 N. Broad St.



# Illinois

LOS ANGELES 337 S. Anderson St. 230 E. Ohio St. 149-159 W. Fort St. DETROIT NEW YORK 342 Madison Ave. SAN FRANCISCO 906 Hobart Bldg.

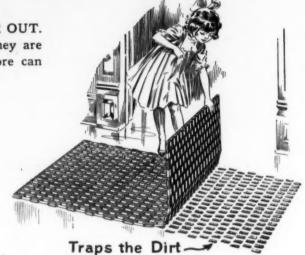
# they Kever Vear Out



WEAR-PROOF MATS cost less because they NEVER WEAR OUT. It is a fact that they will outwear any other kind of mat. They are made to give 100% service and SATISFACTION. What more can you get in a mat?

# CLEAN—SAFE—SANITARY

You can put a WEAR-PROOF MAT anywhere-in the entrance, lobby, corridors, elevators, on the stairs-anywhere, with the positive assurance that they-Will Catch All of the Dirt-Are More Sanitary-Prevent Wear of Floors-Prevent slipping and always be neat and clean. If you want that kind of positive mat satisfaction and everlasting wear-write for our FREE illustrated book which shows the many economic uses for this wonderful mat.



WEAR-PROOF MAT CO., - 2172 Fulton Street, CHICAGO, ILL.

\$90,000. The third new unit is a special school

for 140 pupils.

The following structures are to be completed within a year: Additions at Nathaniel Hawthorne, Wilson Junior High school, and Harvard elementary school, each to cost between \$300,000 and \$400,000.

and \$400,000.

Three new schools are under construction, each costing \$600,000, and containing 31 rooms. They are: Charles Dickens, Oliver Hazard Perry, and William Rainey Harper.

—Arabi, La. The St. Bernard Parish (county) school board will shortly dedicate a school building. The building was erected without extra taxation or bond issue, and cost a total of \$60,000. It is planned to erect another school on the same plan during the present school year.

taxation or bond issue, and cost a total of \$60,000. It is planned to erect another school on the same plan during the present school year. Mrs. L. A. Meraux is president of the Parish board and Mr. J. C. Blanchard is the parish superintendent of schools.

—William H. Gompert, architect and superintendent for the New York City board of education reports that during the past three years 141 new school buildings had been erected at a cost of \$100,900,000. He accompanied his report with a chart showing that in the construction of school buildings 77 per cent of the money is spent on general construction, 10.7 per cent on heating and ventilating, 3.8 per cent on plumbing and drainage, 3.6 per cent on electrical work and 4.9 per cent on furniture.

—A survey of the reconstruction of the North Side high school at Fort Wayne, Indiana, has been ordered. The claim is set forth in an expert report that: "The building is of flimsy plan and construction throughout. The architect was evidently trying to cut the cost at every point and his plans and specifications show that the building is weak and flimsy. The collapse of a part of the roof and wall bears out the statement. There was no unusual reason for the collapse such as an earthquake or explosion. The roof fell just because it was of such weak construction that it couldn't hold itself up. If the shoring were taken out of other parts of the building, without preliminary reconstruction, further collapses would follow."

—The citizens' meeting, held in the Cork school district 5, near Kenosha, Wis., to determine upon the appropriation of \$15,000 for two new school buildings, resulted in a fracas. Of

the 149 votes cast, there were 78 ayes and 71 noes. "In the midst of the fray," report has it, "one man was given a punch in the jaw." The school board won its case.

—At Erie, Pa., the contracting firm of a new school building failed and a bonding company took over the work. The bonding company, it is said, was misled as to the financial soundness of the contracting firm. The legal complications will be worked out by R. Stanley Scobell, the business manager for the board.

—From Tampa, Florida, comes the news that Hillsborough County completed sixteen new school buildings, costing \$2,000,000, to house 7,000 more children. The rate of growth warranted these buildings, and the boom has collapsed. People have quit coming to Florida.

—Rushville, Ind. New heating plants and

-Rushville, Ind. New heating plants and ventilating systems have been installed in two grade schools. A gymnasium has been completed at a cost of \$75,000.

Omaha, Neb. The school board has approved —Omaha, Neb. The school board has approved a recommendation of the building committee that janitors or engineers in charge of schools of ten or more classrooms be paid \$1,740 per year, or at the rate of \$145 per month. Janitors in smaller schools will be paid a proportionate amount, to be determined by the superintendent of buildings. Assistant janitors will be paid \$110 a month for a torus of ten months. of buildings. Assistant janitors will be paid \$110 a month, for a term of ten months.

—Bridgeton, N. J. A contract has been awarded for the erection of two portable schools. These will take care of the overflow from the junior high school.

junior high school.

—New York, N. Y. During the past three years the city has expended more than \$110,900,000 on the 141 new school buildings and additions, thus providing sittings for 202,500 children, according to a report just issued by William H. Gompert, superintendent of school buildings. This brings the number of school buildings in existence to practically 1,000, and raises the valuation to more than \$580,000,000. New buildings now under construction by the board of education will seat 28,029 children. This is the smallest number of sittings to be under construction in many months. The school building program has been gradually tapered off, from the intensive and voluminous construction of several years ago, down to a normal amount of work.

The greatest structural activity is in Queens Borough, where 11,623 sittings are under construction. The Bronx stands next in volume of work with 4,620 sittings. Brooklyn is next with 4,444 sittings, Richmond is next with 4,033 sittings, and Manhattan is last with 3,309 sittings

tings, and Manhattan is last with 3,309 sittings under construction.

It was expected that the condition of overcrowding in the elementary and high schools would be aggravated rather than relieved with the opening of the new term in September. Fewer than 3,000 of the proposed sittings were ready for the opening day, which means that the pupils on part time will be greatly increased. It is believed that little hope for future relief is indicated by the number of sittings to be provided in new buildings, plans for which are in the drafting rooms of the bureau of construction.

—The school board of Ambler, Pa., has

are in the drafting rooms of the bureau of construction.

The school board of Ambler, Pa., has awarded the contract for the erection of the Forest Avenue grade school, to cost \$62,500. The building will be 114 feet by 62 feet in size, and will contain eleven classrooms, an office for the principal, a library, an asembly room, and rest rooms and teachers' rooms. The building will be erected from plans prepared by Mr. Watson K. Phillips, Architect, Philadelphia, Pa.

Dallas, Tex. The school board is completing a \$2,000,000 school building program. The program was made possible by a bond issue, providing \$1,000,000 for the current year, and \$1,000,000 for the succeeding year. The new Lee school was opened for the fall term, while the Lagow and Hay schools will be completed next March. Plans have been completed for the Woodrow Wilson High School and construction work will begin very shortly. In addition to the new structures, additions have been erected to two grade schools which have reduced the congestion.

The Muskegon, Mich., school board has be-

gestion.

—The Muskegon, Mich., school board has be-—The Muskegon, Mich., school board has before it the maturities on outstanding bonds, and sees its way clear to engage in a new building project involving some \$750,000. In comment the Muskegon Chronicle says: "Understanding that this is the program of the board of education, no public spirited citizen of the city of Muskegon can raise a reasonable protest. The need for adequate, modern, safe and sanitary buildings to take the place of the present relics of another age in school building in this city is (Concluded on Page 86)



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(Concluded from Page 84)
patent to all. Those parts of the city now being served by antiquated and inadequate buildings are at a serious disadvantage as compared with the rest."

—Augusta, Kans. The board of education has purchased an eight-acre site adjoining the high school for an athletic field. The cost, which will reach \$1,550, will be paid out of the proceeds of athletic events.

of athletic events.

reach \$1,550, will be paid out of the proceeds of athletic events.

—According to a report made by the United States Bureau of Education there were 165,417 one-room schools in 1924 as compared with 174,445 reported for 1922. The total number of school buildings has decreased in the same period from \$270,574 in 1922 to 263,280 in 1924. The number of consolidated schools reported is 14,913 for 46 states, as contrasted with 12,310 reported for 43 states in 1922. That the decrease in school buildings is due to consolidation is partly indicated in the increase in total number of teachers. The number of teaching positions reported for 1924 was 748,309, as compared with 705,399 in 1922.

—Versailles, Ky. A school building to cost approximately \$100,000 is under construction.

—Richmond, Ky. A large addition to the school plant is in process of erection.

—Washington, D. C. According to A. L. Harris, municipal architect, all of the \$6,463,000 appropriation for the five-year building program has been used in construction, and school sites purchased sufficient to use all of this year's appropriation of \$2,450,000. Unless Congress removes the limitation on site-buying, school construction will be temporarily discontinued. Estimates prepared in the superintendent's office show that there are 453 additional classrooms needed at the present time, as compared with 461 last year.

—Atchinson, Kans. An elementary school costing \$130,000 has been completed. The

—Atchinson, Kans. An elementary school costing \$130,000 has been completed. The building contains a combination playroom and auditorium and is equipped with the most modern equipment. The building completes an extensive building program.

—Ackley, Ia. The citizens recently voted a bond issue of \$129,000 for a new school. The contract will be awarded this winter and construction work will begin early next spring. Mr. Raymond Moore, of Cedar Rapids, is the architect for the building.

THE JULIUS ROSENWALD FUND

THE JULIUS ROSENWALD FUND For the year ending June 30th, 1926, the Julius Rosenwald fund contributed toward 479 schools and 14 teachers' homes, located in Alabama (29), Arkansas (41), Florida (9), Georgia (12), Kentucky (6), Louisiana (30), Maryland (17), Mississippi (61), North Carolina (74), Oklahoma (26), South Carolina (64), Tennessee (35), Texas (57), and Virginia 32. The Rosenwald fund has thus far contributed \$2,621,814. The purpose of the fund is to cooperate with

wald fund has thus far contributed \$2,621,814. The purpose of the fund is to cooperate with the school authorities in efforts to equip better rural schoolhouses for the negroes of the southern states. "It provides \$400 for a one-teacher school, \$700 for a two-teacher, \$900 for a three-teacher, \$1,100 for a four-teacher, \$1,300 for a five-teacher, \$1,500 for a six-teacher or larger, \$700 for a four-room teachers' home, \$900 for a five-room teachers' home or larger, and \$200 a room for the addition of one or more classrooms to a Rosenwald School, provided such school has not already received the maximum aid.

aid.

"It is a condition precedent to receiving the aid of The Fund that the people of the several communities shall secure, from other sources, to-wit: from public school funds, private contributions, etc., an amount equal to or greater than that provided by The Fund. Labor, land and material may be counted as cash at current market values. Money provided by The Fund will be available only when the amount otherwise raised, with that to be given by The Fund is sufficient to complete and equip the building, including modern desks and two sanitary privies.

is sufficient to complete and equip the building, including modern desks and two sanitary privies. The site and buildings of each school aided by the fund shall be the property of the public school authorities.

"The school site must include ample space for playgrounds and for such agricultural work as is necessary for the best service of the community. Aid will be granted only when the site meets the approval of the State Department of Education and the General Field Agent of The Fund. The minimum acceptable for a school is two acres. For the larger school more land is desirable."

INSTRUCTION LARGEST ITEM IN NEW

INSTRUCTION LARGEST ITEM IN NEW YORK CITY SCHOOL BUDGET

—Mr. Frederick D. Chambers, auditor of the board of education of New York City, in the latest publication of the bureau of finance,

analyzes the expenditures for education and its auxiliary activities in the city.

Only fifteen per cent of the school budget is spent for auxiliary agencies, administration, operation of buildings, and physical maintenance. The remaining 85 per cent is spent for instruction, according to Mr. Chambers.

The annual recurring dishuresments for school

tion, according to Mr. Chambers.

The annual recurring disbursements for school purposes in the city are analyzed and itemized by Mr. Chambers with the result that the casual reader of the report is struck with the broad extent of the school board's activities. The largest single item is, of course, the salaries of the teaching and supervising staff. In all activities, regular day schools, evening schools, trade and vocational schools, parental and truant schools, and continuation schools, this amounts to \$82,222,465.

Instructional costs, other than salaries.

to \$82,222,465.
Instructional costs, other than salaries, amount to more than \$3,000,000.
The cost of auxiliary educational activities, amounting to \$1,500,000, includes the operation of lecture, community and recreation centers, playgrounds, school lunches, and enforcement of the compulsory education, truancy, and census laws. Another \$870,000 is added to the cost of the auxiliary agencies for the rental and transportation of teachers and children, and fees for the aid and care of children in non-educational institutions.

the aid and care of children in hold institutions.

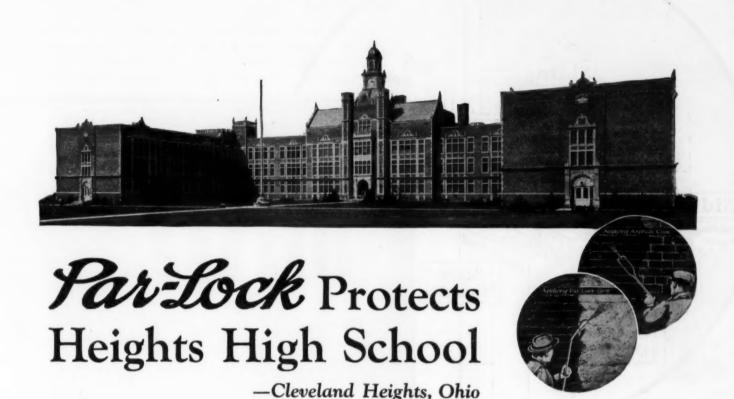
Nearly \$5,000,000 is spent for the physical care of the school plant. About \$3,500,000 of this goes for general repairs to buildings, the remainder being spent for furniture repairs, piano and organ repairs and replacements, and salaries of inspectors, draftsmen and engineers in the building bureau.

More than \$5,000,000 is spent for janitorial service, elevator operators, firemen, stokers, service, elevator operators, coal, wood, and

service, elevator operators, firemen, stokers, cleaners, etc.; custodial supplies, coal, wood, and

water.

The final item of cost is the \$2,500,000 for "administrative control." This is divided into three divisions—educational administration, professional control of the superintendent of schools, the board of superintendents, the board of examiners and the bureau of reference and research, \$1,500,000; business administration, bureaus of finance, building, supplies, and plant operation, \$750,000, and general administration, the offices of the board of education, its president and secretary, \$250,000.



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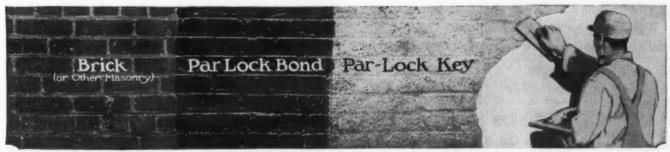
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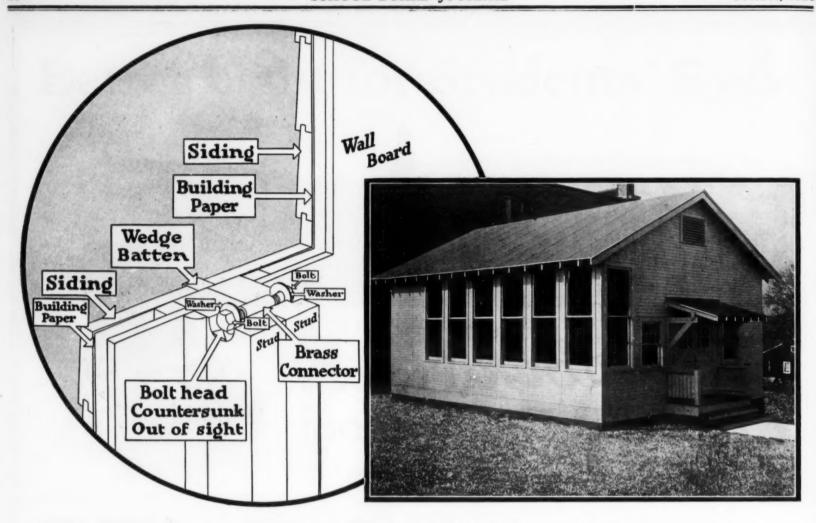
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# SCHOOL FINAN

Muncie, Ind. The school board plans duction of the present school tax levy of \$1.05. A new schedule of expenditures will be adopted, which will entail a reduction in the number of items to an extent that will not impair the efficiency of the school system.

ciency of the school system.

—Omaha, Neb. The estimated deficit of the school fund at the close of the school year was \$116,000, which is divided into a treasury deficit of \$105,413 and \$11,190 in outstanding warrants. The total receipts for the year were \$4,565,650 and the total expenditures amounted to \$4,682,254. The board has adopted a budget of \$2,618,000 for the year 1926-1927, as compared with \$2,831,803 last year.

—Newcastle, Ind. The public school system will be operated at a cost of \$196,500 during the next year. Of this amount, \$71,000 must be raised by taxation. The school tax levy for the school year will remain at \$1.04.

school year will remain at \$1.04.

-Auburn, Ind. The school board has adopted a tentative levy of \$1.22 on each \$100 of property valuation. The levy is an increase of eight cents over last year.

—Peru, Ind. The school board has adopted a tax rate of \$1.35 for the next school year, which is six cents under the rate of \$1.41 of last year.

Fort Wayne, Ind. The 1927 school tax rate has been reduced from 85 cents to 81 cents for the next year. The reduced tax rate will lower the board's income by \$91,000 in the special fund.

—Supt. J. H. Beveridge of Omaha, Neb., has presented a program for the operation of the instructional department of the schools under a reduced budget. The following changes are proposed in order to make up the deficit:

1. Increase the average number of pupils per teacher in the elementary department to 38.

2. Reduce the number of teachers for special subjects, such as art, music, physical education, speech correction, and manual training. 3. Eliminate teachers at the day nursery, the Hattie B. Munroe home for crippled children, and the Nebraska Children's home.

Eliminate clay modeling and the use of the kiln for the present school year.
5. Increase the regular high school teaching

day to six periods.
6. Eliminate the summer session at Technical

High school.
7. Eliminate sheet metal work, telegraphy, and elementary electricity at the Technical High

school.
8. Eliminate radio instruction at Central

High school.
9. Reduce the nursing staff.

10. Hold requests for supplies and textbooks so that every possible economy may be effected.

11. Eliminate some of the library help at Technical High school.

12. Reduce clerical help.

Require all post-graduates to pay tuition. Certain combinations of primary and kin-ten work will be made in the smaller dergarten work schools.

Eliminate the number of rooms for subnormal children.

16. Eliminate all Americanization and evening schools for the present school year.

—New York, N. Y. A statistical study of the financial receipts and disbursements of the board of education for the year 1925, conducted by Mr. F. D. Chambers, auditor of the board, shows that the most costly activities, on a per capita basis, are the parental and truant schools, the Manhattan Trade School for Girls, and the compul-

The study shows that the parental and truant The study shows that the parental and truant schools spent \$630 per annum for each of the 308 pupils, or 54 cents per hour for each. In the parental school several practical industries are operated as part of the educational work and the value of the output of these industries in 1925 was estimated at \$108,916. This was not taken into consideration in computing the per capita cost of these schools. The total cost of operating the truant schools during the last year was \$193.882.

\$193,882. The Manhattan Trade School for Girls spent \$222 per capita for the year, or twenty cents per hour per student. This school also earns an income from the sale of products of the classroom and laboratories, but this was not con-

room and laboratories, but this was not considered in computing the per capita cost.

The compulsory continuation schools cost the city \$983,047 in the year 1925. This represents a per capita cost per annum of \$25.96, or seventeen cents per student on an hourly basis, nearly double the cost per hour of the elementary and junior high school. The regular term elementary and junior high schools cost nine cents per hour per pupil, and the regular term high schools fourteen cents.

The following tabulation shows the total expenditures, the average cost per pupil per hour, and the per capita per annum costs, of the various instructional activities of the board:

Cost Per

School		Per Pupil	Capita
	otal Cost	Hour	Annum
Day Elementary	65,913,250	\$0.00	\$ 83
Day High	15,469,415	.14	145
Training	502.420	.18	168
Vocational and Trade	395,730	.13	151
Manhattan Trade, Girls.	266.865	.20	221
Parental and Truant	193.882	.54	630
Compulsory	and a your		-
Continuation	983.047	.17	26
Voluntary			
Continuation	85.312	.08	8
Vacation	178.131	.06	7
Evening Elementary	608,640	.11	
Evening High and	000,010		
Trade	1.010.000	14	

Mr. Chambers, in his report, shows that of the total school budget, 81.716 per cent goes directly for teachers' salaries. The total instructional costs are 85.03 per cent. Auxiliary agencies require 2.43 per cent; the maintenance of the school plant, 4.76 per cent; the operation of the school plant, 5.3 per cent, and administration, 2.46 per plant, 5.3 per cent, and administration, 2.46 per

At Muncie, Indiana, the school tax levy will be cut four and one-half cents. The Muncie Press says: "Congratulate the city school board and the executive officers of the school for keeping step with the spirit of the times by practicing economy in government combined with efficiency." economy ciency.

—The New York City board of education receives \$2,867 more out of the state support fund than it did last year. This is due in part to the fact that the system employs more teachers and in part to the Cole rural school act. The state support for 1927 will be \$23,806,259. This item, together with local fund of \$84,010,259, will give



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the New York City school system a total of \$107,817,214. The board has set aside in the budget for 1927 the sum of \$1,492,692.50 to pay

for substitutes to replace absent teachers.

—Philadelphia, Pa. A total of 20,000 pupils attended summer schools this year, which is an increase of twelve per cent over last year. It is estimated the board of education has been saved

estimated the board of education has been saved a quarter of a million dollars through the summer school attendance.

Mr. F. C. Nieweg, director of the summer schools in Philadelphia, in a statement, shows that the cost of the high school summer courses is \$69,048, and that the same courses if taken in the winter, would have resulted in an expenditure of \$154,770.

The 13,525 elementary pupils taking summer courses cost the board \$84,214, while if taken in the winter, the same courses would have cost \$238,485. The total saving of the board for the summer's work is \$239,993.

—Great Bend, Kans. The board of education has adopted a tax levy of sixteen mills for the coming year. A reduction of two mills was made in the general fund, setting it at twelve instead of fourteen mills; the interest and sinking fund was increased from two to four mills. The decrease in the general fund is expected to raise the same amount of money at twelve mills

The decrease in the general fund is expected to raise the same amount of money at twelve mills as was raised last year with fourteen mills, due to an increased valuation of the district.

The schools of Santa Barbara County, California, will receive \$254,160 in state aid this year, according to the estimated apportionment of W. C. Wood, state superintendent of public instruction. The estimate apportions to the elementary schools \$163,100 on the basis of 233 teacher units at \$700 each, and \$35,496 on the basis of 1,665 units of average daily attendance at \$5.59, making a total for elementary schools of \$198,596. The total for secondary schools is \$55,663.

Levies for the different school districts of

—Levies for the different school districts of Yellowstone County, Mont., for 1926 will vary from two mills to 31 mills. School districts may levy up to ten mills for the general school fund and additional levies may only be made by a special vote.

In addition to the district levies there is a general school fund levy of six mills and an accred-

ited high school levy of three mills, which is col-

ited high school levy of three mills, which is collected over the county as a whole and then divided to the different districts on the basis of the number of school children in attendance, and number of teachers.

—New Haven, Conn. The school board has adopted a budget of \$2,722,913, which does not include the mill and a half tax for new buildings. The largest item of expenditure in the school estimates is \$2,303,990 for instruction. The fund for general control will amount to \$66,996, while the fund for general operation of plant will amount to \$351,826.

—Alton. Ill. A budget calling for an expendi-

—Alton, Ill. A budget calling for an expenditure of \$335,300 for the school year 1926-1927 has been adopted by the board of education. The amount represents an increase of \$4,000 over

amount represents an increase of \$4,000 over last year.

—Muscatine, Ia. The 1926-1927 school budget allows \$186,000 for the general fund and \$30,000 for the school building fund.

—Evansville, Ind. The board of education has reduced its administrative costs and has adopted a tax levy of \$1.00 in place of \$1.05.

—Enid, Okla. The school board has adopted a budget of \$280,400. Of this amount, \$55,400 will be raised by other means than taxation, \$75,000 by the five-mill levy, and the remaining \$150,000 by a new ten-mill levy voted last May.

—Detroit, Mich. The first step in a legal fight to stop the distribution of the state primary school fund has resulted in an order of the local court, restraining the distribution of the money. It is estimated the release of the school funds would mean a loss of \$200,000 as the distribution budget stands.

would mean a loss of \$200,000 as the distribution budget stands.

The Detroit school board's petition states that the 1925 law, giving counties of the state where property values are low and school population out of proportion extra financial aid, conflicts with the state constitution which gives the primary fund to the counties in accordance with the school population. The petition urges that all the moneys paid out under the law be returned.

—Drumright, Okla. The school board has adopted a budget of \$118,000 for the year 1926-1927.

—Altoona, Pa. The board of education has invested \$240,000 in bank certificates for a period of six months. Four certificates of \$60,000 each

will be secured and three per cent interest will

be paid. —Santa Fe, N. Mex. The new school funds apportionment shows \$1,071,379 this year, as compared to \$672,859 last year. The figures show an increase in the apportionment for every

county but one.

—Cottage Grove, Ore. A budget of \$28,318

—Cottage Grove, Ore. A budget of \$28,318 has been adopted by the school board.

—Joliet, Ill. The indebtedness of the board of education has been reduced by \$90,000, making the present deficit approximately \$110,000 for the new school year. The reduction of the deficit has been made possible through the elimination of kindergartens, the curtailment of supplies, the limitation of manual training, and a reduction of the janitorial staff.

—Salina Kans. The school levy has been fixed

reduction of the janitorial staff.
—Salina, Kans. The school levy has been fixed at twelve mills for the next year.
—Wichita, Kans. A tax levy of sixteen mills recently adopted by the school board will provide an income of \$1,952,000. The levy is divided into 10.78 mills for the general fund, three mills for the building fund, 1.25 mills for the sinking fund, .77 mill for interest, and .25 mill for playgrounds. for playgrounds.

for playgrounds.

—Dallas, Tex. The budget for the operation and maintenance of the schools during 1926-1927 has been set at \$2,411,457. Budget items include instructional services, \$1,958,342.77; operation of plant, \$177,250; maintenance of plant, \$107,937.50; capital outlay, \$43,113.32; auxiliary agencies, \$35,305.85; general control, \$63,358.38; fixed charges, \$20,000, and debt service, \$6,150.

The receipts will come largely from taxes, expected to be \$1,730,622.75, and from the state school apportionment of \$12 per pupil, to bring \$560,112. A balance of \$87,432, tuition collections of \$21,476.44, and other income make up the remainder.

the remainder.

—Hutchinson, Kans. The school board has adopted a budget of \$480,000. Of this, \$400,000 is for the general fund and \$34,990 is for the sinking fund, and \$45,120 for interest. The tax levy has been fixed at fifteen mills, which is an increase of one-half mill over last year.

-North Platte, Neb. The school board has adopted a tax levy of 21 mills for school purposes in 1926-1927. This is a gain of 3.5 mills

(Continued on Page 92)

Just another weary, wasted footstep. Only one of hundreds left in the school building today by a tired faculty. And no small wonder that they're tired either. The distances they have to cover! The walking they do from room to room, the running up and down the stairs! And all so needlessly!...Western Electric Inter-Phones could put a stop to wasted footsteps and wasted time. Inter-Phones are doing just that in lots of schools—in schools where principal and faculty get information and speak to one another from their own desks-where they talk over the Inter-Phone—where they don't walk needlessly...School boards might well consider the case against me-it's a case that covers every other wasted footstep as well. It's a case, by the way, that's been very well handled by specialists from Graybar, distributors of Inter-Phones.

From experience, wasted footsteps like myself know that nothing gets rid of us so effectively as Western Electric Inter-Phones. We know that there's nothing that lasts longer, or is cheaper in the end, for Inter-Phones carry a name that means leadership in electrical communication.



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CHICAGO

(Continued from Page 90)

over the levy of last year. It includes eighteen mills for the general fund, and eight mills for the bond fund, making a total of 21 mills.

—Mulberry, Kans. The school board has reduced the school levy from 39 mills to 35½

mills.

—Council Bluffs, Ia. The budget requirements of the schools for the next year total \$227,500. The budget provides \$195,000 for general expenses and \$32,500 for school buildings.

—Perry, Ia. The reduction of the mill levy of the schools will be effected with the retirement of \$35,000 worth of school bonds and the refunding of \$40,000 worth at a lower rate of interest.

—Girard, Kans. The school board has fixed the levy for school purposes at nineteen mills, distributed as follows: General, sixteen mills; repairs and construction work, two mills; bonds and interest, one mill.

—Mexia, Tex. The school board has adopted a tax rate of \$1 for the next year.

—Topeka, Kans. The tax levy of the schools has been fixed at 12.5 mills. It provides 9.27 mills for the general fund and three mills for the building fund.

—Kokomo, Ind. A total of \$361,900 has been set as the budget for 1926-1927. Of this amount,

—Kokomo, Ind. A total of \$361,900 has been set as the budget for 1926-1927. Of this amount, \$152,035 must be raised by taxation.

-The Texas State Board of Education has —The Texas State Board of Education has fixed the per capita scholastic apportionment for 1926-1927 at \$11.50. It is expected that the legislature will grant a supplemental appropriation of more than \$4,000,000 to raise the amount to \$15. The lack of available school funds prevented the adoption of a higher apportionment figure.

-Auburn, Ind. The school board has adopted a tax levy of \$1.22 for 1926-1927, as against \$1.14 for the last year. Of the total levy, 97 cents will be used for operation of the schools and 25 cents for bonded indebtedness.

—Youngstown, O. The budget for the new school year will be approximately the same as last year, which was \$3,500,000.

—State Supt. S. M. N. Marrs of Texas has proposed an increase from one cent to three cents in the tax on gasoline as a means of raising the school tax of the state. Under the plan, one-half of the tax would be used for the

schools and the remainder for the improvement

Attorney General Gibson of Iowa has ruled

—Attorney General Gibson of Iowa has ruled that directors of consolidated independent school districts may not transfer funds from the general fund to the schoolhouse fund without obtaining the approval of the electors.

—New York, N. Y. The annual financial report of the board of education recently made public, shows that the annual cost per capita of instructing children in all branches of the school system, with the execution of the elementary. system, with the exception of the elementary schools, is much less than it was five years ago. The high schools, training schools for teachers, vocational and trade schools, and continuation schools, all cost the city less per pupil than they

schools, all cost the city less per pupil than they did five years ago.

The section of the report dealing with instructional costs covers the five years beginning in 1921 and ending in 1925. It shows that at the end of that period, the high schools had effected a reduction of \$7.45 in the annual cost of instructing each pupil, that the training schools for teachers were spending \$98.21 less to teach the individual student, and that the vocational and trade schools had reduced their quota per pupil by \$31.65. In the case of the continuation schools, it is costing the city \$12.60 less for each pupil attending the compulsory schools and \$5.13 less for those enrolled in the voluntary

### HOW TO LIVE

HOW TO LIVE

America is fast emerging from the primitive period of struggle with forest and field into a period of leisure and luxury in which her millions are taking stock of their surroundings and are asking themselves this question: How may I live most completely in the twenty-four hours which belong to me each day? To live—how to live—that is the question that these plain folks are asking and searching till they find an answer for; and their answer, in the words of Dr. Cabot of Harvard, is to be found in work, play, love, and worship. They are working to more purpose than ever before, and they are producing more; nor is this work limited to that time which they have sold to the employer who manages they have sold to the employer who manages them; they are working for themselves on their own time for the love of it.—Robert R. Smith, Chicago Normal College.

schools. The cost of educating the individual elementary school pupil rose \$2.99, while that of the parental school pupil mounted \$185.43 during the same period.

The vocational and trade schools have shown a marked reduction in per capita costs in five years, dropping from \$182.63 to \$150.98. In 1921 it cost the city \$376,409 for the 2,061 pupils attending the trade schools as compared with \$395,730 for 2,621 pupils last year.

Although the day elementary schools show a comparatively small increase in the per capita cost over a five-year period, rising from \$80.23 in 1921 to \$83.22 in 1925, the actual cost of instruction was over \$7,000,000 greater because of the greater number of children in daily attendance. The city's bill for 726,218 elementary pupils in 1921 was \$58,266,328. Last year for 791,996 pupils, it was \$65,913,249.

On an hourly basis, the per capita cost in the

On an hourly basis, the per capita cost in the elementary schools for the year 1925 was considerably less than that of all the other branches, except the voluntary continuation classes. The report shows that it costs 9.283 cents per hour for every elementary school pupil under instruction. In the voluntary continuation classes, the cost was but \$225 cents per hour. cost was but 8.225 cents per hour.

The hourly cost in the other branches of the service was as follows: High schools, 14.426 cents; training schools, 17.874 cents; vocational and trade schools, 13.336 cents; parental and truant schools, 53.910 cents, and compulsory continuation schools, 17.117 cents.

In 1921 the cost per pupil per hour for the different instructional activities was: Elementary schools, 8.883 cents; high schools, 15.556 cents; vocational and trade schools, 14.376 cents; parental and truant schools, 41.668 cents; compulsory continuation schools, 27.599 cents; voluntary continuation schools, 10.838 cents.

The school building program of Atlanta.

The school building program of Atlanta, Georgia, involving \$8,000,000, has been halted by the city board commission. The difference of opinion arises out of the insistence on the part of the commission that the school board establish a salaried architectural bureau. To this the school board does not agree. Dr. R. M. Eubanks, president of the board of education, says: "The board of education holds its authority from the

(Concluded on Page 94)



# In the Finest Schools

Medart Steel Locker installations are in keeping with the finest fittings and furnishings in our educational institutions. Medart Quality is unquestioned—recognized as the standard by which all lockers are judged. The economy of Medart Steel Lockers lies

in the many years of satisfactory service. Finished in green or gray with standard louvred doors. « Many styles and sizes to meet all requirements.

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# MEDART LOCKERS

# For The Big Game—Quick

This advertisement is addressed to the school boards, and super-intendents who are wondering how to provide seats for their fel-low townspeople for the big football game.

There is no doubt that Americans like to take their athletics sitting down. Stamping around in the mud or on the frozen ground at a football game is not the form of entertainment best calculated to bring the crowd again to your games.

It is easy in these days of big stadiums and paved roads for them to get to some other town for some other game.

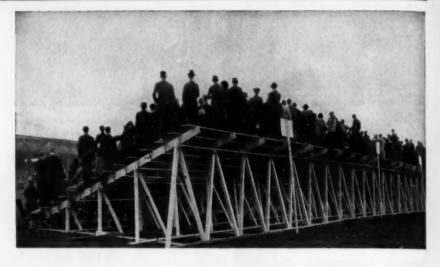
# For that big game-Send the Coupon

You can end all your worries on this score very quickly. Circle A Bleachers, Portable, Sectional and Safe, end them in a way that does not require the permanent expenditure of large sums of money, but does quickly provide safe, comfortable, seats for your crowds.

Circle A Bleachers are strong enough to hold four times the number of people that they seat. They will safely hold that crowd whether it is sitting, standing or jumping up and down.

Circle A Bleachers are not Circus Seats. They are especially built for athletic use by a leading manufacturer specializing in school re-

They are endorsed by hundreds of schools and colleges who have used them for many pur-



You can have them for the big game this Fall. Send the coupon today. We will send you all needed information.

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(Concluded from Page 92)

people, who have by their votes, empowered us to run the school system. We are supposed to know what is best for the system, but the bond commisssion has halted our every effort to begin commission has halted our every effort to begin work on this absolutely necessary school development program. I don't like a difference of opinion with the commission, but if we must have a fight let us have it now and get it over with and get this work started. The people are blaming the board for this useless delay, but the blame lies with the commission."

—The Texas state board of education will fix the state school supply fund at \$12 per capita. It was believed that this per capita should be \$15, but the funds required for free textbooks will make this impossible.

—The school board of Decatur, Ill., finds itself in a peculiar dilemma. It has maintained three tracts of land for playground purposes. These tracts were separated from school plans and hence subject to taxation. The board has come to the conclusion that it must dispose of these tracts as it cannot afford to pay the taxes.

tracts as it cannot afford to pay the taxes.

—The tax collections of Owensboro, Ky., are \$20,000 lower this year than last, which will also affect the school funds. The decrease is due to the smaller tobacco stocks and a lower rate of

-Neosho, Mo. The school board has passed an amendment to its rules providing that no married woman shall be elected to a teaching

married woman shall be elected to a teaching position. Women at present on the teaching staff are not affected.

—Toledo, O. The board of education has approved a budget of \$6,076,000 for the year 1927. This is an increase of \$71,000 over last year.

—Newcastle, Ind. The cost of educating the children of the city during 1926-1927 will be approximately \$241,000. The tax levy for the year will remain at \$1.04.

—The school tax system of Illinois calls for

—The school tax system of Illinois calls for an immediate and drastic overhauling, according to the rural school division of the Bureau of Education. Cross inequalities are said to exist between the several school districts, with the result that education within the state is suffering

The Bureau points out that tax rates payable in 1926 for grade school purposes in one district totaled \$2.75 per \$100 of equalized assessed

valuation, while in another district the corresponding rate totaled 24 cents per \$100.

In one county of the state there are six one-room school districts in which the railroads pay 58 per cent of the local tax, and six one-room school districts in which the railroads pay no local school tax. In one township in another county, the railroad valuations amount to 56 per cent of the total valuation, while another township has no railroad valuation. In this county the average school tax rate paid by twelve one-room school districts, without railroads, is more than double the average paid by twelve others with railroads.

Great differences in school tax rates are said to exist between districts with low valuations and many pupils on the one hand, and with high valuations and few pupils on the other.

It is contended that inequalities in tax rates are followed by inequalities in educational methods, and facilities, which discriminates between children of different districts.

—Youngstown, O. Economy is to be the watchward of the heard of education during the

tween children of different districts.

—Youngstown, O. Economy is to be the watchword of the board of education during the new school year. One of the largest economies of the year will be the carrying of a maximum load of pupils by each teacher in the lower elementary classes. The average load carried last year was between 30 and 32. The schools will be operated on a levy of \$5,000 less than last year, with two new high schools and three grade schools in operation. The budget carries a levy of \$600,000 for buildings, compared with an average of \$750,000 in the program of the last three years.

—Indianapolis, Ind. The school board has adopted a budget of \$11,464,790 for the year 1926-1927, which will require a tax levy of \$1.09. The budget contemplates the collection of \$3,358,000 this fall under the \$1.10 tax levy of last year, and an income from other sources of \$592,000.

Proceeds from the proposed bond issues in the 1926-1927 bond issues in the budget will amount to \$1,875,000. This involves a \$1,050,000 bond issue for the Shortridge high school, a \$125,000 bond issue to complete the elementary school program, and \$700,000 for the new Arsenal Technical High School.

The new building program to be started in the spring of 1927 will cost \$745,000, of which

\$372,750 will be taken care of by the 1927 budget and will be financed entirely by taxation. The new item for building and equipment is shown in the budget to be \$1,578,658, of which \$640,856 is rebudgeted from last year and \$125,000 is to be raised by bond issue.

—Caney, Kans. The school board has reduced the tax levy for 1926-1927 to thirteen mills, which is a reduction of seven mills over that for the last year. The reduction is the result of economical handling of the school finances.

# THE NEW YORK CITY ENROLLMENT

THE NEW YORK CITY ENROLLMENT

The New York City schools opened with an enrollment of more than a million children in the regular day schools and from 10,000 to 15,000 young workers in continuation or parttime schools. The greatest increase was in the junior and senior high schools where 870,000 pupils were admitted to the elementary and junior high schools, and approximately 140,000 to the senior high schools. The elementary schools had a loss of 8,000 to 10,000 students as compared with last year.

The opening of the new school year showed an increase in the number of boys and girls on part time. Approximately 65,000 children will be in part-time classes due to the fact that the school board has provided only 2,957 new sittings. The number of pupils in part-time classes has increased from 56,789 in 1925 to 64,154 in 1926. Thirty of the 48 school districts have reported pupils on part time, and the most congested district is Queens, which has 10,875 children on part time.

There appears to be little prospect of relief

dren on part time.

There appears to be little prospect of relief There appears to be little prospect of relief in the shortage of seats during the new school term as only 11,000 additional sittings have been provided to date. There were no new buildings in Manhattan, the Bronx, or Brooklyn. A year ago the number of new school buildings reached 38, which provided 62,171 new sittings. In September, only four elementary school buildings and an addition to one of the high schools were opened, providing a total of 2,957 sittings. In November, it is expected that 7,275 additional sittings will be ready, including 3,111 in the new building of the Jamaica High School In December, the Port Richmond high school and an addition to the School for the Deaf will be occupied. be occupied.





FUN-FUL Playground Equipment is the result of experience, a quarter of a century devoted exclusively to the development and manufacture of children's outdoor health building goods by this Company. The best you can buy, this we guarantee.

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# A School Sidewalk Scheme

Wm. C. Dickinson, Nashville, Tenn.

Attractive walks that function are an essential of good school grounds design, and the solution of this problem at the new Peabody Demonstration School, George Peabody College for Teachers, Nashville, Tennessee, as a successful example will be of interest.

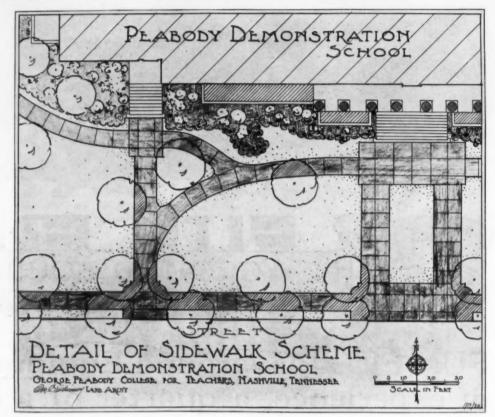
The landscape planning for the Peabody Demonstration School was done while its architecture was being determined. The final location of the building on the lot was the result of a study of the use of the playgrounds and the relation of the building to the other buildings on the campus. The location, as the accompanying plan will show, allows about 70 feet of lawn space between the school and the street, a distance made necessary by the shape of the land in the rear, but after all a desirable economy, as the front lawn of any school need only be adequate for architectural setting, and should never be large enough to encourage play, which belongs elsewhere. A school grounds as a practical demonstration of community civics must have one area of well kept lawn with modest, appropriate planting; such does not interfere with school activities when properly planned.

With the limitation of a small plot of show ground, that must be planned to be attractive without excessive police regulations, begins the problem of walks.

Walks must go where one needs to go directly, or unconsciously suggest a better way. As a product of good art, walks must not cut up the middle of things unpleasantly, but must allow the lawn by dominant areas of grass to give setting to the building approached. Planting is a useful adjunct to walk layout, but it should not be used too obviously to change their direction, although it may push walks somewhat away from the foundations of buildings, etc. The width of a walk must be in scale with its use and its part in the design. Its form must be architectural as well as functional. Let us

see how some of these principles are worked out:

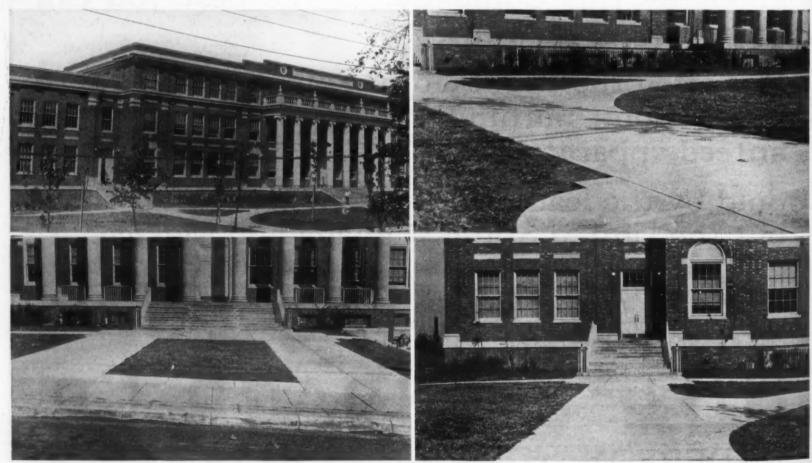
A large number of children are brought to this school in automobiles; hence a straight line to the street is desirable. You will find it at both side and front doors. These walks are crete slab would have glared in the sun, broken the continuity of lawn, and ruined the dignity of the portico, carefully designed by the architect in proportion balance of light, shade, and color; incidentally, a crime that is frequently perpetrated in front of many public buildings. The width of the walk, the landing in front of the steps and at the street, cause few people to stray on the grass itself.



widened into a platform at the steps of both doors and at the street, points where crowding is greatest. These are the main and widest walks. The grass panel in the center of the largest walk is significant. An unbroken con-

Children that walk to school may be inclined to make a short cut to the front door; this is provided for by means of connecting side door walk and the central platform. A branch walk connecting the front door and the side door is

(Concluded on Page 99)



WALKS IN FRONT OF THE PEABODY DEMONSTRATION SCHOOL, GEORGE PEABODY COLLEGE FOR TEACHERS, NASHVILLE, TENN.

TOP (left to right): Exterior View of School; Secondary Walks with "Corner-Circle" in Foreground.

BOTTOM (left to right): Central Panel of Walk; View of Sidewalk Showing Platform at Door.



# **DURABILT STEEL LOCKERS**



Durabilt Single Tier, Double Row Lockers with Metal Base Plates in Alcoves Eastside High School



Eastside High School Paterson, N. J.





Durabilt Single Tier Double Row Lockers in a Gym Room Eastside High School



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The selection of the proper make of steel clothing lockers for the modern school installation is a matter of great importance.

great importance.

The trend today in building construction is to place lockers in the corridors and other places of prominence, consequently an improper selection would seriously affect the beauty of the interior decorative scheme.

Durabilt Steel Lockers are the choice of thousands of experienced School Executives who are convinced that Durabilt products embody all that can be desired in a locker installation and at lower cost because they are BUILT BY LOCKER SPECIALISTS.

The locker equipment in the New Eastside High School at Paterson, N. J., was not bought on price. The Dura-

bilt reputation for quality and dependability was a specific reason why the Board of Education invested nearly \$17,000 in Durabilt Steel Lockers and Basket Trucks.

Various views of this installation are displayed in the illustrations shown above. Note the rigid and strong appearance of the convenient basket trucks. The spacious alcoves and gym room with their attractive double row, single tier Durabilt Lockers appeal to the sense of strength and durability.

We would be pleased to assist in preparing locker specifications and submitting prices or other data for your consideration. Our new locker handbook is just off the press and if you desire a copy just phone our nearest Sales Representative or write us direct at Aurora.

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—a high degree of fire safety, a desirable rigidity that cuts down vibration and results in sound proofness, and finally a generous building economy.

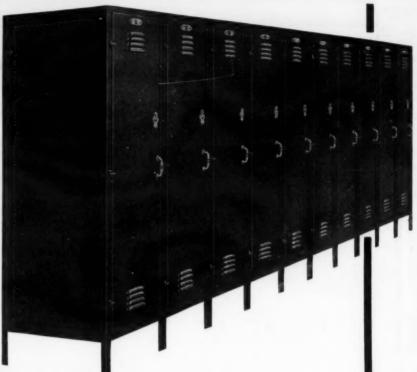
When you use Truscon Steel Joists you cut field labor to the minimum, you speed up construction, you eliminate the necessity for special machinery. These factors decrease construction cost. Yet in every way you live up to the requirements of present day codes for school construction. Investigate the merits and economies of Truscon Steel Joists now.

Catalog free on request.

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These unseen values reveal themselves in satisfactory service over a long period of use. Write for the Durand catalog.



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Milcor "Expansion" Casing (Patented Jupe 12, 1922 and January 26, 1926). This metal trim, shown here in position in a wall plastered on Milcor Stay-Rib metal lath, eliminates coatly wooden casings for doors and windows, black-boards, etc., improves the appearance of rooms, makes them more sanitary, easier to keep clean — and actually saves money.

#### Be sure to get this data

We have developed a special type of "Expansion" Casing (No. 9) for black-board trim. It has been used with great success on some of the finest new schools in the country. Let us show you how it can be adapted to your plans — for new schools or for rebuilt rooms. Our engineering service is offered without cost or obligation. Usually Milcor can improve the building, make it safer, and at the same time show you a saving.



Stop this frightful loss of children's lives and taxpayers' money by insisting on

# FIRESAFE CONSTRUCTION

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Firesafe, Lightning-**Proof Metal Roofing** Metal Tile - a neat, p metal roof that renders u tection against storms, lied Send for these Valuable Books new concepts of the true vali

MILCOR

(Concluded from Page 96)

worked out by means of this same walkway. This connecting path is narrower than the other walks in order to express its secondary function; it has, however, to guide pedestrians, wide flowing curves which will be noted on the plan, and at the platforms projecting angles to serve the same purpose. These angles give architectural crispness to the design and are as functional as curves if projected sufficiently. This secondary walk is pushed as close to the building as possible to give a large lawn space. By means of the planting at the foundation of the building, it is kept in a graceful curve and an artificial appearance is avoided. The same walk continues around the corner of the building to the playground, but is frankly crowded away in a sweeping curve from a basement area way by Access to the playground, heavy planting. which is completely fenced, by this path is merely secondary-the principal entrances being through the building and from a side street.

A feature to be noticed is the junction of the straight walks with the sidewalk along the city street. The corner-circle with the square has proved a very successful means of guarding against corner cutting. It is ample, three feet in area, covered, pleasing in design, and fills the space usually worn bare of grass. It is an example of applied walk psychology.

As the plan indicates, it is the intention of the designer that there be no planting other than trees and grass except at the foundation of the building. There will be no flower beds or masses of shrubbery breaking up the lawn. Planting serves to unduly emphasize walks, which are otherwise subordinated by the large areas of grass. The results from this sort of designing is a simple unfenced lawn, with the necessary amount of paths, that will largely

take care of itself with the exception of cutting and watering. A minimum of regulations from within the school building will keep it from serious abuse. The heavy shrubbery planting at the base of the building is adequate and in due time the present monotony of the lawn will be relieved by shadows from the trees which are at present small.

The solution of the Peabody Demonstration School walk problem should prove a useful example to many educators struggling with the problem of school ground design.



#### A Principal's Code

A code to be observed by school principals was formulated by G. W. Lehman as a master's thesis at the Ohio State University. It contains

thesis at the Ohio State University. It contains the following seventeen points:

1. Never criticize a predecessor.

2. Criticize no one destructively in the presence of others. And do not "tear down" unless you can suggest improvement.

3. Do not act independently of others. Whether or not you use their suggestions, consult your associates about matters of more than personal importance.

4. Always give sincere consideration to the

4. Always give sincere consideration to the feelings and experience of others.
5. Greatest success comes from the proper

delegation of duties to others.

6. Cultivate a pleasing manner in giving suggestions and instructions.

Be sure you are right before making decisions.

Be sure that you do things thoroughly at

the right time.

9. Let "service to others" be the watchword. 10. Never allow personal desire to over-shadow justice toward pupils and teachers.

11. Before publishing items of school business, such as costs, consider public reaction, through a possible misunderstanding of condi-

Avoid "chumminess" with students or teachers beyond carefully thoughtout limits because of the consequences.

cause of the consequences.

13. Authority must not be asserted except in unusual circumstances. Avoid it by leading teachers and associates to your way of thinking, if it is better than theirs. Suggest your points in such a manner as this, "Do you think this or that would be an improvement or an advantage?"

14. Never allow people to think you are conscious of doing favors for them.

15. Do not request students to avoid things

15. Do not request students to avoid things you are guilty of doing.

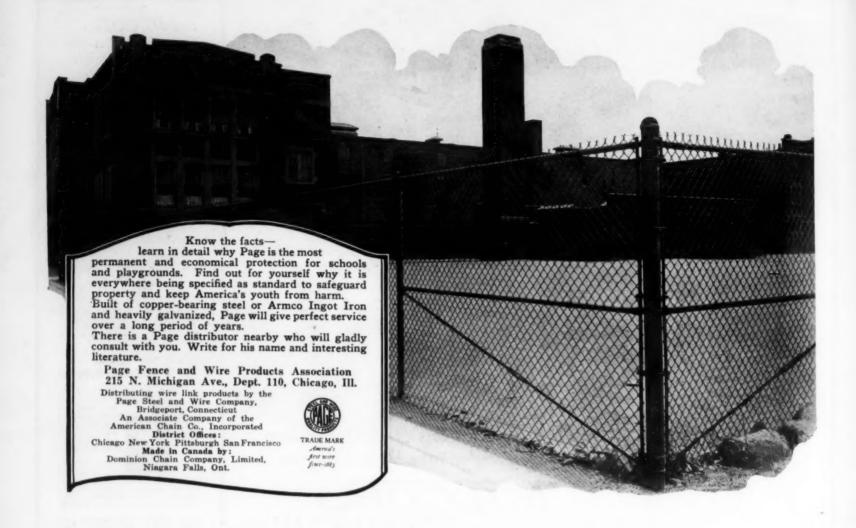
16. Do not request unnecessary work of teachers or pupils, because it is not their duty to satisfy your whims. Every investigation must have a worthy purpose.

17. You cannot discipline a pupil by using threats or force. He will ignore the punishment and do his utmost to "get even".

—David M. Bishop, aged 70, who taught school for fifty years, recently passed a county teachers' examination, and will teach a school at Fosterburg, Madison County, Illinois.

terburg, Madison County, Illinois.

—In Colorado it is proposed to make the education of adults compulsory. It is proposed to go to the state legislature with a bill which will demand that men and women give scientific study to the physical, mental, and spiritual well being of their offspring. The compulsory courses will be built on the following lines if the suggestions of its proponents are heeded: (1), effects of physical handicaps, removal or amelioration; (2), effects of unwise discipline, the technique of wise government; (3), effects of fatigue, provision for adequate rest in childhood and adolescence; (4), mal-nutrition, the practice of correct nutrition; (5), effects of misguidance in personal and sex hygiene, intelligent guidance.



—Under a rule of the board of health of Clay County, Ind., school bus drivers in the county are required to pass a physical examination before they may be allowed to operate a bus. Drivers are disqualified through loss of limbs, loss of motion, defective vision, hearing or heart, epilepsy, or a mental or communicable disease.

—Waterloo, Ia. The office of the superintendent of schools has been moved to the West high school building.

—Supt. William McAndrew of Chicago has set a new standard for the grade schools through the adoption of twelve new requirements. Last year the principals of the respective grade schools were given ten points for their schools to reach as standards. At that time, more than half of the schools reached the standard of the first inspection, and all attained it before the year was over.

—New York, N. Y. With the opening of

-New York, N. Y. With the opening of schools in September, 35,000 pupils in elementary schools went on part-time and 19,000 in high schools were placed in similar classes. In the junior high school, 1,389 were in part-time classes, A part of the overcrowding is due to a reduction in the number of new schools. The reduced building program is due to a cut of \$35,000,000 in school building appropriations.

-Haskell, Okla. Under a new rule of the school board, all children entering the first grade must present a birth certificate. The rule has been passed to assist the state school authorities in keeping their record of the vital statistics.

-Portland, Ore. The school board has ruled that high school freshmen and newly enrolled students must sign the usual pledge not to join school fraternities. The pledge was the cause of two suspensions of students last year and their cases are pending in the court.

—Knoxville, Tenn. Prof. Joe Jennings, of Peabody College, Nashville, has been employed as director of the newly created research bureau of the school system. Prof. Jennings will begin a thorough study of the school system, with a view of discovering defects in the service which may be remedied.

-State Superintendent H. V. Holloway and the members of the Delaware state board of edu-cation recently visited all the white schools in the three counties of the state. The purpose

was to gain first hand information on the physical conditions of school buildings.

cal conditions of school buildings.

—The tremendous growth of the North Carolina schools is brought out in a statement by the state superintendent's department: In 1900 the school property was valued at \$1,097,564 and in 1925 \$70,705,835. The expenditures for capital outlay were \$56,207 in 1900 and \$12,470,059 in 1925. During this period the number of teachers employed increased from 8,320 to 22,248; the enrollment from 400,452 to 809,834, and the high school enrollment from 2,000 to 67,000. the high school enrollment from 2,000 to 67,000. The one teacher schools were reduced from 7,829 to 3,698.

A recent circular of the U. S. Bureau of Education recently reported the number of students completing the rural curricula in teacher-preparing institutions; also the types of schools these students expect to enter during the school year.

year.

A summary of the reports from 33 normal schools and teachers' colleges show that out of 1,596 students completing the one-year curricula, 1,380, or 86.4 per cent, plan to enter one and two-teacher schools; 80, or five per cent, will enter the larger open-country and village schools, and 90, or 50.6 per cent, will continue their education. Of the 706 students completing the two-year curricula, 189, or 26.8 per cent, plan to enter one and two-teacher schools; 470, or 66.6 per cent, will enter the larger open-country and village schools; eleven, or 1.5 per cent, the city schools, and 36, or 5.1 per cent, will continue their education. continue their education.

Dr. Isaac D. Rawlings, state health director —Dr. Isaac D. Rawlings, state health director of Illinois, in a recent statement, declares that sixty per cent of the 50,000 school teachers of the state lose approximately 200,000 days annually because of illness. He points out that the teaching profession is one of the few fields of selective employment that requires no physical examination of applicants.

A health certificate ought to be a qualification A health certificate ought to be a qualification requirement of every candidate seeking a teaching position, according to Dr. Rawlings. The salary cost of lost time from sickness of teachers probably exceeds \$1,000,000 a year. Investigations in Springfield show a loss of 1,700 days because of sickness last year by 268 of 433 teachers employed in one system of schools. The figures applied to the entire state, indicate

that close to 30,000 teachers, or 60 per cent of the total, lost about 200,000 days from the classrooms because of illness during the last school

-Salem, O. The position of dean of girls in the high school has been created by the board of education.

-Puplis in the public schools of Kansas will —Puplis in the public schools of Kansas will see Old Glory this year even though the school may be too poor to buy a flag. Under an arrangement at the state printing plant the first page of each of the 1,000,000 volumes published will be devoted to a picture of the American flag. The insertion of a full-page reproduction of the flag was suggested to the state printing plant by the Americanization committee of the American Legion.

—The first visiting teacher demonstration in

-The first visiting teacher demonstration in Connecticut was completed this summer when the board of education of New Haven received the report of Miss Ettiene Baldwin, who was attached to the staff of the Lincoln school the

past year.

The child Welfare Association of Connecticut arranged and financed the demonstration to show the value of specialized work with difficult school children in helping to solve the problem of delinquency and backwardness.

The report shows that 111 children in 65 families have been under observation. The teacher held 886 interviews with children, conducted 355 consultations with teachers, and made 634 calls in the homes of pupils to study behavior causes.

-The vast size of the New York City school —The vast size of the New York City school system is graphically illustrated in the annual financial and statistical report of the board of education. With the aid of a series of charts and diagrams, the book shows that the pupils enrolled in the schools are more than twice as numerous as those of Chicago, and nearly four times those of Philadelphia. New York's school attendance is given as 917,117, Chicago's as 409,936, and Philadelphia's as 228,201.

More interesting than these comparisons is a

More interesting than these comparisons is a chart in the report showing that the number of children attending the schools of New York City is almost equal to the number receiving instruction in Chicago, Philadelphia, Detroit, Newark, and Los Angeles combined.

(Concluded on Page 102)



# End Overcrowding Before Winter Comes

OVERCROWDING of school rooms, with the attendant bad effects upon the health and the studies of children, is bad. In the early fall overcrowded school rooms can not always be avoided, but the bad effects can be minimized by plenty of open windows and fresh air.

But in the winter the lack of light and air space is going to have a serious effect upon the children, holding them back in their studies, making them subject to all manner of colds and similar ills. Crowded schools then are bad. They are also unnecessary.

You can avoid these conditions in your school this winter.

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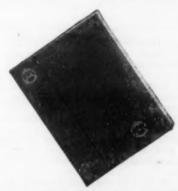
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Another chart reveals that the combined school populations of fourteen of the large cities in the country—Cincinnati, Indianapolis, Seattle, Cleveland, Boston, Pittsburgh, St. Louis, Baltimore, Minneapolis, Washington, Buffalo, Milwaukee, San Francisco, and Kansas City, come to little more than the figure credited to New York

—Complete regulation uniforms are required of every girl attending the San Diego, California, high school with the opening of the new school term.

-Rumford, Me., is the first town in the state to adopt the all-year school plan. Under the lead of Mr. L. E. Williams, the town started five years ago to hold a six weeks' summer session. This year the plan was enlarged, and instead of having one center, four different centers were opened, and the attendance increased to more than 400.

—A revision of the course of study at Alton, Ill., is proposed by Supt. Curtis. The last general revision was in 1918 and since then many modifications in textbooks have been made. In the last five years it is estimated 35 per cent of the books have been changed, and in five years more, a complete change will have been

Cleveland, O. Immediate steps to eliminate fraternities in the high schools will be taken by Mr. Alfred A. Benesch, member of the board of education. In the opinion of Mr. Benesch, of education. In the opinion of Mr. Benesch, the fraternities encourage a caste system among students and should not be encouraged by institutions supported by public funds.

—Springfield, Ill. The school board has made five changes in school district boundary lines.

—Portland, Me. Nine new school libraries have been opened with the reopening of the school term.

have been opened with the respensing school term.

To offset the midyear graduations there will be opportunity for the acceleration of brilliant pupils in special rooms, while much will be done for children who find it hard to keep up in their

—The New York City board of education is contemplating the abolition of the feather duster in the schools and will introduce the vacuum cleaner instead.

—The New York City board of education expects to formulate new rules forbidding high

school fraternities and sororities. Harold G. Campbell, associate superintendent in charge of high schools, is confident that the new rule will prove effective. Dr. Frank P. Graves, state commissioner of education for New York, in discussing the subject recently, said: "It would seem almost axiomatic to say that all cliques, fraternities and snobhishness have no place in fraternities and snobbishness have no place in democracy's high school. But it is only too evi-dent that societies of this kind do exist in our high schools, and constitute a most difficult prob-lem. These organizations are part of the attempt to ape college life that has been counte-nanced or encouraged in many high schools. Opinions differ concerning the general value of fraternities in college, but there is little doubt that in the high school they generally lead to lowered scholarship and infractions of dis-cipline." cipline.

—The two little red schoolhouses in districts adjoining Mulford, Mass., have been abolished. The school board has appropriated \$7,500 for pupil transportation to the larger school. By closing the two schools the board believes that a saving of \$4,000 has been made.

The latest issue of "State School Facts," the official publication of the North Carolina Department of Education, continues the study of the measurement of educational efficiency taking the data for 1924-1925. By taking the identical measurement, and using a different set of figures, the relative standing of the units measured are ascertained and comparisons made. In the study, ten factors were taken, the first pertaining to teachers, term and children, and the other five pertaining to expenditures and values. In arriving at the index number for any school system, one hundred was used as the perfect score for each factor used. The first five factors are designated academic factors, and the last five financial factors.

The study shows that the general score for the state as a whole was 56.9 during 1923-1924, and during one year the score has increased to 59.5, or a growth of 2.6 points. The general index for the rural systems was 50.1 in 1923-1924, and 53.1 during 1924-1925. This is an appropriate increase of three points for the year. average increase of three points for the year. The score for the city schools was 81.1 in 19231924, and 83.9 in 1924-1925, which is an increase of 2.8 points for the city schools.

Greensboro led the city schools by having the

as a rule, made the highest scores, an average score of 86.5. In group two, Salisbury took first place over New Bern, which held first place last time. Kingston moves up from sixth to third place, with a score of 84.6.

—The all-year school plan was tested out at Long Beach, N. Y., by conducting a summer high school. A report submitted to the board of education by Supt. Walter J. Schwalje, states of education by Supt. Walter J. Schwalje, states that the experiment proved a success. Students were enrolled from a large number of cities and towns. Over 90 per cent of the students secured credit marks above 85 per cent. The board of education consists of President Jesse Froehlich, Mrs. T. A. Cook, E. J. Healy, Henry Green, and L. Sondergaard.

—The assistant principals of the New York City schools have planned a series of conferences which are intended to improve the discipline in the middle grades. The objectives are the following:

1. To give teachers an understanding of the nature and purposes of discipline.

2. To provide a common point of view in the handling of cases, so that there will not be conflict of method.

3. To stimulate successful teachers, by approval of their work, to further advancement. To assist inexperienced or weak teachers

4. To assist in these grades.

To develop a spirit of cooperation among the teachers of this group. 6. To establish a uniform procedure in the matter of reporting cases to the office.

7. To solve, if possible, certain very definite cases in these grades.

A. Pupil A, who has the wanderlust, plays truant, has little respect for authority, etc.

B. Pupil B, who is an overgrown boy, bullies the other members of his class, and has threatened a teacher.

ened a teacher.

C. Pupil C, who is an average girl with no mother, who is a bad influence on the other girls in the schools and wants to leave home.

8. To make the teachers better able to cope with new cases that may arise.



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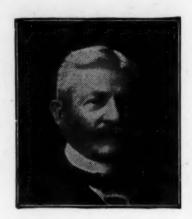
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AN UNSOUND PAY POLICY

Public officials who are studying proposals for revision of teachers' salary schedules will probably pay slight attention to the "family wage", a device under which compensation would be based on the needs of the worker and not on services rendered, says the New York Sun in a recent editorial. It continues: The idea is thoroughly paternalistic and is based on an indefensible conception of economics.

The family wage contemplates a graduated

The family wage contemplates a graduated scale of pay, adjusted to the number of dependents of the employed. It has been adopted to an extent in the bureaus of several European governments and is said to have won some recognition in certain industrial wage agreements abroad

In the public schools in this country the idea In the public schools in this country the idea has been advanced in the hope of stemming the exodus of the man teacher. He has been getting scarcer year by year, and threatens to become wholly extinct. Fifty years ago more than half the teachers of the country were men; today fully 85 per cent are women. Compensation is partly responsible for this, of course. A rate of pay hardly sufficient to satisfy the women teachers—witness the current campaign for higher

pay hardly sufficient to satisfy the women teachers—witness the current campaign for higher salaries—is not likely to prove attractive to a man with wife and children to support or to one who some day expects to be the head of a family. This disappearance of the male pedagogue is giving concern to school administrators. They do not belittle the teaching ability of women as a group, but they would like to have more men for classes of adolescent boys. In the hope of attracting more men Superintendent O'Shea not long ago suggested that bonuses be paid to teachers of boys' classes. While women assigned to boys' classes would receive the same extra allowance, the policy would be followed of first assigning all available men to such grades. Thus the equal pay law would not be violated.

It is a question, however, whether any device of this kind would have the desired effect. There is something more than compensation involved in

something more than compensation involved in

the refusal of men to enter teaching. Even before the days of the equal pay law their number in the profession began to decline. Reasonably or unreasonably, teaching has come to be looked upon as a woman's occupation. Only the man with a strong natural inclination for the life of the schoolroom is turning to it. He certainly should be adequately compensated, but his compensation should be based on the service he performs, not on the size of his family.

UNIVERSITY CITY SALARY SCHEDULE

—The board of education of University City, Mo., has adopted a salary schedule and a list of requirements for teachers and principals entering the school system. Under the rules, preference will be given to teachers and principals with two or more years of teaching experience; for the kindergarten and elementary grades, teachers must have completed not fewer than sixty hours of college work in a college and graduation from a first grade high school; teachers in the junior and senior high schools must be graduates of colleges or universities, of equal rank with the state university.

In general, a teacher enters the system as a third assistant, but in order to remain in the system, the work of the teacher must merit promotion to the rank of second assistant before the close of the second year. Experienced teachers coming into the system will be given advanced position in the schedule as the superintendent and the board of education may determine, depending upon the preparation and the character of the experience.

Under the rules, the first and second years of service in the school system will be a trial or

Under the rules, the first and second years of service in the school system will be a trial or probationary period, and no teacher will be employed beyond that period unless satisfactory work has been done to merit a recommendation

for re-appointment. The rank of first assistant is for exceptional merit and is given where the teacher has been in the system for at least two years. The work of the teacher must be rated as exceptional by the principal, the superintendent, the supervisor, and the evidence must be approved by the board of education. Consideration is given to all points listed on the efficiency blank, the points being arranged under five general heads as follows: Personal equipment, social and professional equipment, school management, technique of teaching, and results.

Teachers must be students of educational problems and should make reasonable effort to improve themselves in the teaching profession. The requirement may be met by attendance at approved summer schools, by professional work in extension courses, and by domestic and foreign travel. Teachers failing to comply with the requirement will not be entitled to advances provided in the schedules, or if at the maximum will be subject to such action concerning the failure as the board may determine.

The salary schedules are divided into five sec-

The salary schedules are divided into five sec-

The salary schedules are divided into five sections, and are as follows:

Schedule I (60 college hours).—Third assistant, first year \$1,200, second year \$1,300, third year \$1,400, fourth year \$1,500; second assistant, second year \$1,300, third year \$1,400, fourth year \$1,500, fifth year \$1,600; first assistant, third year \$1,400, fourth year \$1,500, fifth year \$1,600, sixth year \$1,700, and seventh year \$1,800.

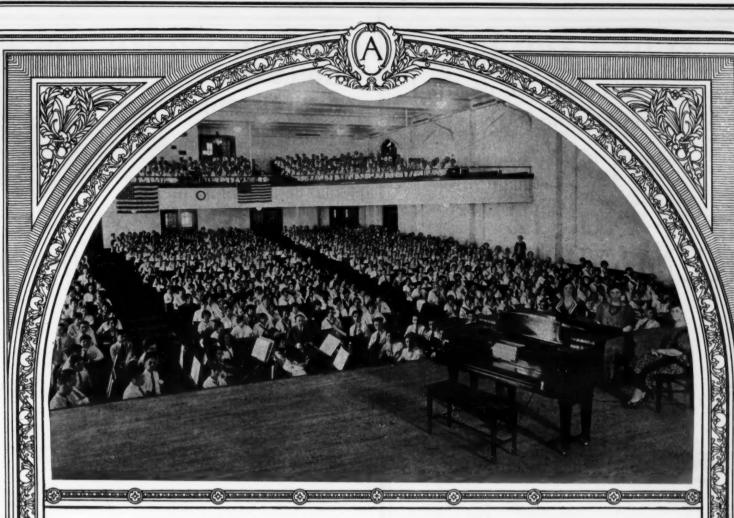
\$1,800. Schedule II (90 college hours).—Third assistant, first year \$1,300, second year \$1,400, third year \$1,500, fourth year \$1,600, fifth year \$1,700; second assistant, second year, \$1,400, third year \$1,500, fourth year \$1,600, fifth year \$1,700, sixth year \$1,800; first assistant, third year \$1,500, fourth year \$1,600, fifth year \$1,700, sixth year \$1,800, seventh year \$1,900, eighth year \$2,000.

sixth year \$1,800, seventh year \$1,900, eighth year \$2,000.

Schedule III (A. B., B. S., or Ph.B. degree, 120 college hours).—Third assistant, first year \$1,400, second year \$1,500, third year \$1,600, fourth year \$1,700, fifth year \$1,800; second assistant, second year, \$1,500, third year \$1,600, fourth year \$1,700, fifth year \$1,800, sixth year \$1,900, seventh year \$2,000; first assistant, third year \$1,600, fourth year \$1,800, fifth year \$2,000, sixth year \$2,200, seventh year \$2,400, eighth year \$2,200, sixth year \$2,400, seventh year \$2,600; head assistant, fourth year \$2,000, fifth year \$2,200, sixth year \$2,400, seventh year \$2,600, eighth year \$2,800, ninth year \$3,000.

Schedule IV (M. A. or M. S. degree).—Third assistant, first year \$1,600, second year \$1,700, third year \$1,800, fourth year \$2,000, sixth year \$2,000, sixth year \$2,000, fifth year \$2,000, sixth year \$2,000, sixth year \$2,100, seventh year \$2,200, eighth year \$2,300; first assistant, fourth year \$1,900, fifth year \$2,100, sixth year \$2,300, seventh year \$2,500, eighth (Concluded on Page 107)

(Concluded on Page 107)



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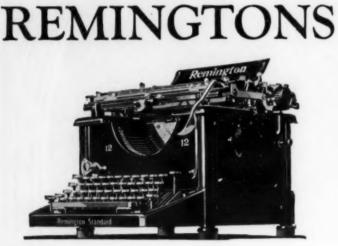
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(Concluded from Page 104)
year \$2,700, ninth year \$2,900; head assistant, fifth year \$2,200, sixth year \$2,400, seventh year \$2,600; eighth year \$2,800, ninth year \$3,000, tenth year \$3,200.
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privileged to see the vast school public whom
they have served.
Thomas H. Costello, who recently died at Chicago, was one of those unseen but useful work-

aronas n. Costello, who recently died at Chi-cago, was one of those unseen but useful work-ers. His life's story is one of humble beginnings, and yet rich in achievement. He rose from the workman's bench to the head of one of the largest school supply manufacturing plants in the United States.

He found his first employment with Dwight

He found his first employment with Dwight Holbrook, a manufacturer of school apparatus at Windsor Locks, Conn. Holbrook was a pioneer in the manufacturing of school goods. He was preceded in the business by his father who founded his first factory in 1832.

There came a time, however, when Thomas Costello yearned to come west. He landed in Chicago and became identified with the A. H. Andrews Company, then the leading house of its kind in the country. He also induced Dwight Holbrook to join the Andrews Concern. The business in Windsor Lake was carried on by C. W. Holbrook, son of Dwight Holbrook, who was also the father of Fred Holbrook, long identified with the Andrews Company.

Mr. Costello continued with the Andrews

Mr. Costello continued with the Andrews Company for about twenty years, then with the late C. F. Weber on December 1, 1895, formed

the C. F. Weber & Co., of Chicago. This company afterwards became the Weber-Costello-Fricke Co., and finally the Weber-Costello Company. Upon the death of C. F. Weber, thirteen years ago, Mr. Costello became president of the Weber-Costello Company and continued in that office until his death. With the exception of two short intervals—for a period with a hardware manufacturing concern in New Britain, Conn., (Landers-Ferry-Clark), and with a wood turning plant in Springfield, Mass. (The Woodhull Co.), Mr. Costello was actively engaged in the school supply and furniture industry throughout his entire business career.

Thoroughly grounded in mechanics, with prac-

entire business career.

Thoroughly grounded in mechanics, with practical experience in both machine shop and wood turning plant, he brought to his later day problems a ripe judgment and a precision in the manufacture of his products that made them mechanically superior to all competitive lines. Much apparatus still in use is fabricated under Costello patents. For over forty years he made

MR. THOMAS H. COSTELLO.

and developed Old Reliable Hyloplate and despite his ripe experience in the manufacture of blackboards he experimented eight years before willing to announce Sterling Lifelong Blackboard, the crowning achievement of a long, busy, and successful career.

Thomas H. Costello was born August 11, 1853, in New York City. His parents were born in Ireland. After living in New York for several years they removed to Connecticut where young Thomas found his first employment.

Mr. Costello was a modest, home-loving man, and had a fine family. Three children survive him, William E. and Rose M. of Chicago, and Frank J. of Denver. His wife, nee Rose McGrath, died a year ago.

WILLIAM E. PULSIFER HONORED
Bates College honored William E. Pulsifer,
president of the D. C. Heath Publishing Company, with the doctorate of letters. In presenting the degree, President Clifton D. Gray said:
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-Mr. H. E. Smith has been elected superintendent of schools at Antigo, Wis., to succeed J. F. Waddell.

—Mr. T. E. Sesbeau of Lawler, Ia., has been elected superintendent of schools at Leland.
 —Mr. E. S. Reid of Ovid, Mich., has been elected superintendent of schools at Berkley.

-Mr. Wm. C. McGinnis of Revere, Mass., been elected superintendent of schools at Chelsea, to succeed Frank E. Parlin.

—Miss Lillian Cherniss, of Pocatello, Ida., has been elected supervisor of elementary schools at Dubuque, Ia.

-Mr. R. G. Creekmore of Skiatook, Okla., has been elected superintendent of schools at Tonk-



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GREEN BAY, WISCONSIN



—Mr. J. H. Wiggins has been reelected president of the board of education at Eureka, Kans. Mr. H. F. Rockhill was reelected vice-president

Mr. H. F. Rockhill was reelected vice-president of the same body.

—Mr. Charles Geiger has been appointed business manager of the school board at Corry, Pa. Mr. Geiger will have charge of the duties of supervising janitor in addition to the business management of the school district.

—Mr. Harry Collins has been appointed to the board of education of Greencastle, Ind., to succeed Thad. Jones. At the reorganization meeting, Mr. Collins was elected president, Mr. E. C. Thomas treasurer, and Mr. E. K. Hamrick was reelected as secretary.

—Mrs. Rhea M. Smiley has been elected president of the board of education at Augusta, Kans.

Kans.

—The school board of East Grand Forks, Minn., has reorganized with the election of officers for the next year. Mr. Paul Johnson was re-elected as president, Mr. L. B. Hiler as secretary, and Mr. Leslie Sullivan as treasurer.

—Mr. S. P. Emmons, president of the board of education at Mexico, Mo., is serving his 21st year as chairman, and his 37th year as a member of the board.

year as chairman, and his 37th year as a member of the board.

—Dr. Victor R. Schiller, a member of the Chicago board of education since May, 1925, died recently at his home, after a long illness. Dr. Schiller, who was 46 years of age, had been a practicing dentist for the last twenty years. While a member of the board he took an active interest in the board's school building program and frequently inspected the progress of the

and frequently inspected the progress of the construction work.

—Mrs. Eleanore C. Paulson, chief clerk of the board of education at Rockford, Ill., has resigned after completing a service of 22 years. Mrs. Paulson is succeeded by Miss Vera Walling.

—Mr. Fred D. Knight, president of the board of education of Duluth, Minn., has been reelected for a fourth consecutive term. Mr. Charles A. Bronson, clerk of the board, has been re-elected, with an increase in salary. W. A. Abbott was elected vice-president, and R. J. Coole was re-elected treasurer.

—Mr. H. J. Collier, Jr., business manager of the board of education at Fort Wayne, Ind., has been given a new three year contract.

been given a new three-year contract.

—Mr. J. M. Wyatt has been elected president of the board of education of Wellington, Kans., to succeed Dr. F. G. Emerson. Dr. L. H. Sarchet was elected vice-president, and George Sloth-

—Mrs. Ray Vermilya has been elected secretary of the board of education at Brownstown, Ind., to succeed O. E. Emerson.

—Mr. E. M. Bennes has been elected president the board of education at Thief River Falls, inn. He succeeds E. O. Mogensen.

-Mr. J. O. Bergeson has been elected president of the board of education at Virginia, Minn., to succeed H. A. Ebmer.

—Dr. Grady Gammage has been elected president of the State Teachers' College of Flagstaff, Ariz., succeeding F. A. Cotton, who resigned.

Dr. Gammage is a graduate of a high school and college in Arkansas where he received his education. Following his graduation, he became a deputy circuit clerk, and later taught in the rural and city schools.

In 1912 he came to Arizona, and in 1916 he received the degree of M. A. from the State University and was awarded a scholarship to Harvard University. He was a principal and superintendent for several years, the last five of which were spent as head of the Winslow school system. school system.

Dr. Gammage frequently gives lectures on educational and social problems in Arizona and other states.

-R. B. Hollingshead is the new superintendent at Littleton, Colorado.

A. O. Myron, superintendent at Lemmon.
 D., is now superintendent at Heron Lake,

-A. B. Hardy of Thompsonville, Mass., has been elected superintendent at Plymouth, Mass.

—George E. Myers of Ellendale, N. D., has been elected superintendent for Hillsboro, N. D. —Henry D. Jenkins, district superintendent of the New York City schools since 1911, retired on September 1. He had been in the school system since 1876. When he resigned he had charge of districts 27 and 29 in Brooklyn. Thomas O. Baker and Frank J. Arnold have been assigned as superintendents for these districts.

-Dr. Gabriel R. Mason, principal of the Clark junior high school, represented the New York City schools at the conference of the Universal Pedagogical Union held on September 14th and 15th at Lausanne, Switzerland.

—The new members of the Edgewood, Iowa, school board are H. R. Alcorn, J. J. Terril, Martin Hagensick, I. W. Chapman, and Dr. M. L.

—At Rock Springs, Ill., Mrs. Orpha Hamilton, a member of the school board, committed suicide by shooting herself. She had worried over school administrative affairs.

over school administrative affairs.

—Huntley N. Spaulding, chairman of the state board of education of New Hampshire, is the Republican candidate for governor. The Manchester Union says: "He has in his present position been an extremely efficient and widely popular official, known in every quarter of the state. He may be assumed, therefore, with propriety, to have at least average strength as a vote-getter. He has an exceptionally attractive personality and is singularly free from intra-party enmitties."

-Mr. Wm. E. Smythe, for three years super-intendent of schools at Thermopolis, Wyo., has accepted a professorship at the University of Colorado.

-Dr. Henry M. Maxson retired on September 1st, after completing 34 years as superintendent of schools at Plainfield, N. J.

-Mr. Ernest R. Caverly, of Newton, Mass., has been elected principal of Drury High School, at North Adams, succeeding Mr. James Vose.

—Dr. G. S. Hadley retired from the school board of Coldwater, Mich., on July 1st. Dr. Hadley had served as secretary of the board during a period of twenty years. Mr. William Fletcher has been elected to take the place of Dr. Hadley on the board.

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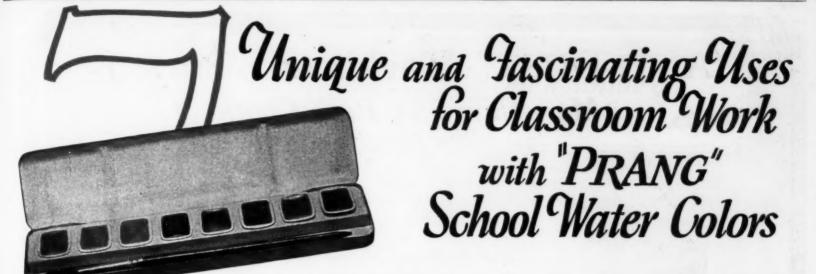
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IME was when water colors were used in class for painting pictures only. Veteran Art Supervisors will remember when "Art" was simply another chore in the school day for students—without any particular "rhyme or reason."

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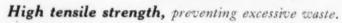
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ANTI-DUST

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SUPERINTENDENCY CHANGES AT FRESNO, CALIF.

Mr. William J. Cooper, for the last five years head of the school system at Fresno, California, has accepted the superintendency at San Diego, at an initial salary of \$9,000 per annum.

Mr. Cooper is a graduate of the University of California and holds two degrees given by that institution. He was district superintendent at Piedmont for three years, and since 1921 had been in charge of the Fresno school system. He is a regular instructor at the summer sessions of the State University and at Fresno State College. Mr. Cooper is a frequent contributor to the educational magazines.

Mr. Walter R. Hepner, formerly principal of

Mr. Walter R. Hepner, formerly principal of the Fresno high school, who succeeds Mr. Cooper as superintendent of schools, is a graduate of the University of Southern California and holds two University degrees. He completed two years of graduate work at the University of Chicago, and also pursued some summer studies at the California University.

at the California University.

Following his graduation, Mr. Hepner was a teacher of science in the high schools of the state. In 1919 he was appointed principal of the Long Beach evening high schools, and in 1920 he resigned to become vice-principal of the Fresno high school. After three years he was appointed assistant superintendent and director of research for the Fresno city schools. During the school year 1925-1926 he was principal of the high school and assistant to the superintendent of schools. tendent of schools.

PERSONAL NEWS OF SUPERINTENDENTS —Mr. W. H. Gordon has been elected superintendent of schools at Northville, Mich., to succeed A. J. Helfriech. -Supt. W. G. Bolcom of Virginia, Minn., has

been re-elected for another year.

-Mr. E. W. Jordan has been elected superintendent of schools at Spencerville, O., to succeed V. O. Tolle.

—Mr. Roy R. Roudebush, formerly superintendent of schools at Kentland, Ind., has been appointed first assistant superintendent to the state superintendent of instruction. Mr. Roude-

bush succeeds G. A. Spencer who resigned.

—Mr. E. B. Bergquist of Little Falls, Minn.,
has been elected superintendent of schools at

-Mr. H. E. Dewey of Maumee, O., has accepted a position as assistant professor of education at the Pennsylvania State College.

—Mr. O. H. Plenzke of Menasha, Wis., has been appointed assistant state superintendent of schools, to succeed C. J. Anderson.

—Mr. J. E. Kitowski of DePere, Wis., has been elected superintendent of schools at Menasha, to succeed O. H. Plenzke.

-Mr. C. D. Fox has been elected superintendent of schools at Stryker, O.

-Mr. W. G. Scarberry of Gallipolis, O., has been elected superintendent of schools at Wells-

-Mr. J. D. Ray of Billings, Mont., has been elected superintendent of schools at Mulberry Grove, Ill.

-Mr. G. E. Meyers of Ledgerwood, N. D., has been elected superintendent of schools at Hills-

-Mr. Fred Emery has been elected superintendent of schools at Amsden, O.

—The residents of Tazewell County, Illinois, have filed a petition to remove Supt. C. L. Martin, charging neglect of duty.

-Mr. R. B. Sparks of Plainview, La., has been elected superintendent of schools at Marshall.

elected superintendent of schools at Marshall.

—Mr. Harold T. Lowe of Hopkinton, R. I., has been elected superintendent of schools at North Providence. Mr. Lowe is a graduate of the State Normal College of Buffalo, N. Y., and holds a degree given by Hobart College of Geneva. He also took graduate work at Columbia University, the University of Wisconsin, and the Rhode

Island College of Education. He had filled the

Island College of Education. He had filled the office of superintendent for the towns of Hopkinton, Charlestown, and Richmond.

—Dr. William H. Allen of the Institute for Public Service, New York, recently scored the creation of the position of superintendent-emeritus for Dr. William H. Ettinger at a salary of \$12,000 a year. He characterized it as a spectacular honest graft, alleging that it would make a puppet of the legally elected superintendent.

—Mr. Grover Hooker of Arvada, Colo., has been appointed assistant superintendent of schools at Jackson, Miss., to succeed W. M. Kethley, who resigned.

Kethley, who resigned.

—Among the instructors in the recent summer school of Indiana University were Mr. H. B. Allman, superintendent of schools at Rushville; Mr. R. N. Tirey, superintendent of schools at Bloomington, and Mr. J. W. Stott, superintendent of schools at Frankfort.

—Mr. Cyril D. Locke has been appointed principal of the Howe high school at Billerica, Mass.—Mr. W. H. Millington of Maynard, Mass., has resigned to become head of the schools of Townsend, Ashby, and Lunenberg.

—J. K. McCarter of Lyons, Ind., is the new superintendent at Bicknell, Ind. His successor at Lyons is R. H. Trotter.

—The school board at Dowagiac, Mich., on recommendation of Superintendent A. H. Robertson, dropped Glen E. True, for six years principal of the high school, and his wife, by a vote of 4 to 1. The action was taken "to eliminate friction and bring about co-operation among faculty members."

—Mr. A. J. Stoddard of Bronxville, N. Y., has

ulty members."
—Mr. A. J. Stoddard of Bronxville, N. Y., has

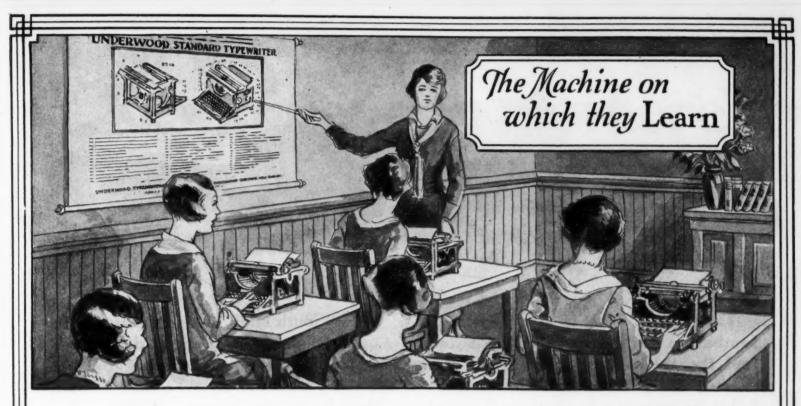
—Mr. A. J. Stoddard of Bronxville, N. Y., has been elected superintendent of schools at Schenectady, succeeding the late E. R. Whitney.

—Mr. F. G. Stevenson, of Saginaw, Mich., has been elected superintendent of schools at Dubuque, Ia., succeeding O. P. Flower.

—Miss Beatrice McLeod, state director of special education in Wyoming, has been given a nine months' leave of absence for study at Columbia University.

—Mr. A. C. Olney, commissioner of secondary schools of California, resigned from that office in August.

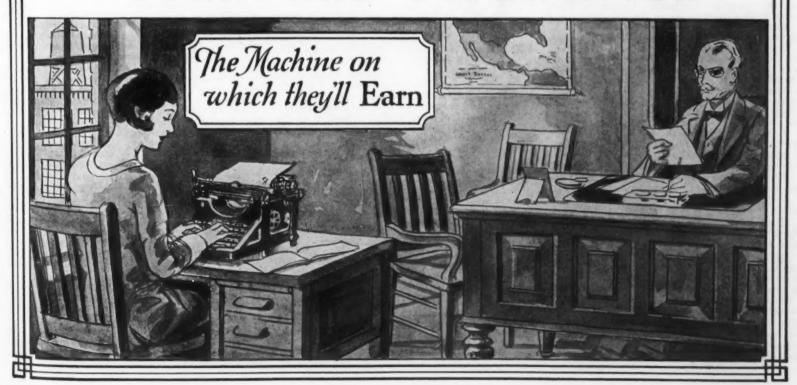
(Concluded on Page 112)



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-Mr. Clyde U. Phillips has entered upon his h year as superintendent of schools at sixth year a Eureka, Kans.

—Mr. L. W. Irvin has become director of physical training at Eureka, Kans.

—Mr. E. G. Lockhart of Iowa City, Ia., has been elected superintendent of schools at Rock-well, to succeed A. L. Spooner.

—A writer in the West Virginia Gazette speaks of Dr. S. E. Weber, superintendent of the Charleston schools, as "a real likable human being without any of the frills of the old fashioned school teacher. He works with his students more as a university professor works."

—Seven out of the thirteen school superintendents in Logan County, Ohio, have changed with the opening of schools. Homer B. Wood leaves Belle Center to go to Scioto county, and is succeeded by Charles Grothaus; F. D. Mygrant, of York Center, succeeds W. E. Royer at West Mansfield; V. W. Perry, of Zanesfield, goes to a junior high in Toledo, vacating in favor of W. G. Halley, Bellefontaine; Carl Scheidt succeeds Forest Huston at Middleburg; Chester Hutchinson, West Liberty, assumes charge at Monroe township, succeeding L. G. Wright, now Madison county farm agent; Harry Kilgore leaves the teaching profession in favor of C. W. Giltner, Markle, Ind.; W. A. Miller, superintendent in Fayette county, succeeds B. A. Aughinbaugh, who goes with the state department of education.

—Mr. C. E. Strange, of Downs, Kans., has hear elected wrigingle of the junior high school

-Mr. C. E. Strange, of Downs, Kans., has been elected principal of the junior high school at Augusta, Kans., at a salary of \$1,900 per

—New York University has recently created a department of college and university education which is in charge of Prof. John O. Creager.

—Mr. J. H. Payne of Richmond, Ky., has resigned after seven years of service, to accept the superintendency at Maysville, at a substantial increase in salary. Mr. Payne is succeeded at Richmond by Mr. W. F. O'Donnell, who was formerly head of the Carrollton schools.

The Carrollton superintendency has been filled with the appointment of Mr. Paul Boyd, who recently received his master's degree from Columbia University.

—Mr. C. A. Kittrell of LeMars, Ia., has been elected superintendent of schools at West Water-loo for the coming year.

—Mr. R. F. Ringham, of Brook, Ind., has been elected principal of the junior high school at LaPorte, Ind.

—Mr. Louis A. Peterson, superintendent of schools of North Sanpete District, Utah, has succeeded Mr. Orson Ryan as superintendent of schools at Logan City. Mr. A. E. Jones of Moapa Valley, Nev., succeeds Mr. Peterson as district superintendent.

—Mr. W. A. Pillans has been reelected as business manager of the board of education at

business manager of the board of education at Lorain, O.

-Miss Blanche I. McClun has been elected supervisor of elementary instruction at Chanute, Kans.

—Mr. Otis A. Earl has been reelected president of the school board at Kalamazoo, Mich.

# CONSOLIDATION AND TRANSPORTATION IN NORTH CAROLINA

The latest issue of State School Facts, issued by the North Carolina Department of Public Instruction, shows that the one-teacher and two-teacher rural schools are gradually being elimiteacher rural schools are gradually being eliminated, while the three-teacher school is on the increase. Since 1916-17, the report shows, the number of rural schools with more than three teachers has more than doubled by having increased from 409 to 1,082. The increase is not confined to the white schools only, for there were five times more schools of the three-teacher type for the colored race in 1924-1925 than there type for the colored race in 1924-1925 than there were in 1916-1917. There were 796 consolidated schools in existence at the close of the year 1924-1925. Of this number, 703 were for white children, and 93 were for colored children.

children, and 93 were for colored children.

The report brings out several interesting facts, viz.: (a) the decrease in four-teacher white schools; (b) the increase in each type of colored school; (c) the larger proportion, nearly 60 per cent, of the white schools having more than six teachers; (d) the tendency for the larger type of schools to increase more rapidly. Robeson County reported the largest number of consolidated schools, 33; Mecklenburg County showed the next largest number, 30; Guilford County was third in order with 26 schools of

this type. Eight counties reported no consolidated schools having as many as four teachers. One county is operated on the county-unit plan of consolidation.

The county-wide plan has developed as an outgrowth of the consolidation idea. There are at present in the state eleven counties which have made the county the unit and have provided for a term of eight or nine months. Public transportation does not necessarily

Public transportation does not necessarily have to be provided, but in most cases of consolidation it usually accompanies it, especially a consolidation of any considerable size. Pamlico County was the first to purchase a motor truck for school use, and Edgecombe purchased one a year later. Since that time this phase of the work has increased.

During 1924-1925, there were 1,909 vehicles, mostly auto, which transported 69,295 children to and from school. These trucks traveled an average of 40,667 miles a day, and lacked about \$5,400 of costing one million dollars for their operation and maintenance during the year. This is an annual cost of \$14.92 per pupil transported, or an annual average cost of \$26.30 per mile of or an annual average cost of \$26.30 per mile of route, or ten cents per pupil per mile of route. The average cost per truck was \$493.71 and each truck traveled an average of about twenty miles truck traveled an average of about twenty miles per day. Granville County took first place with 84 motor buses; Wilson County was second with 71 motor trucks; Johnson County was third with 63 trucks, and Guilford was fourth with 60 trucks. Five counties reported that they had no motor vehicles. In Cumberland County, 29 trucks made the longest trips, these trucks traveling a total of 1,604 miles a day, or an average of over 55 miles per day for each truck. Six trucks in New Hanover County also made long trips, an average of 54.3 miles per day. The shortest routes are in Ashe County, where each truck makes an average of 4.4 miles per day, a total of 40 miles for the nine vehicles operated.

North Carolina ranks fourth in the number of pupils transported throughout the country, and is surpassed by Indiana, Ohio, and Mississippi. States which have resorted to transportation of school children to a large extent are Georgia, Iowa, Louisiana, Massachusetts, Minnesota, Oklahoma, Pennsylvania, Virginia, Alabama, Michigan, Nebraska, Tennessee, and Texas.

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From ocean to ocean, from the Rainy River to the tip of Texas, there is not a state in which Kewaunee Labora-tory Furniture is not used in its leading schools. We could quote many other similar expressions as the following:

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A New York Science Instructor wrote: "Any science man may be proud of Kewaunee Furniture."

A Florida College Manager wrote: "When we have new laboratories to equip we always take the matter up with the Kewaunee Company."

A Kansas Board of Education wrote: "We do not believe there is anything on the market comparable with Kewaunee Furniture."

A California Principal wrote: "I have found Ke-

waunee Laboratory Furniture of a high degree of excellence in workmanship, simplicity and adaptability. I count it the best on the market."

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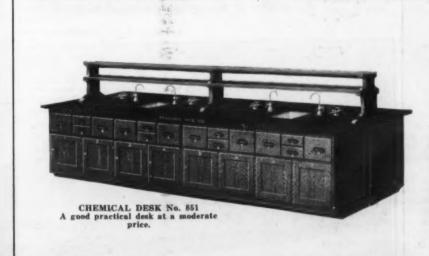
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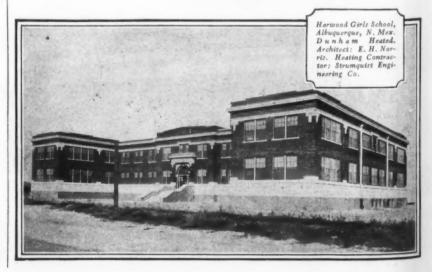
on every genuine Dunham Thermostatic Radiator Trap. It is placed there for your protection and your assurance of the Dependability and Satifaction which characterine Dunham Heating Service.

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For that length of time this company has been making steel products, has been gaining experience and passing the results on - plus service - to its

This experience is valuable to every user of steel lockers, for the modern improvements in the new Berloy Steel Lockers, which make for unusual convenience and long life, reflect these many years of specialization. The steel used in them is specially rolled for the purpose in our own mills.



Installed Along Corridor Walls in Benjamin Bosse High School, Evansville, Ind.



1926

The design is such as to give the utmost in strength and rigidity. The enamel is baked on at high temperature to insure permanence.

When contemplating locker equipment for your school, do not fail to investigate the merits of Berloy Steel Lockers—and Berloy Service. Our engineers can offer valuable suggestions in planning the most efficient installation. Write the nearest office.

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Berloy Steel Lockers, in Jefferson High School, Los Angeles, Calif.

### HYGIENE AND SANITATION

HYGIENE AND SANITATION

It has been estimated that 60 per cent of the 50,000 teachers of Illinois are out approximately 200,000 days because of illness. Since the average pay is about \$1,500 for the 180-day year, the loss exceeds a million dollars a year. Dr. Rawlings, state health director, says: "In other specialized fields of employment a physical examination to show satisfactorily good health is required of applicants. It ought to be so for teachers. Some railway dining car systems give medical examinations to their employees twice monthly. Periodic health audits are required by law of pastuerized and certified milk handlers in Illinois. Railroads, factories, steel mills, big delaw of pastuerized and certified milk handlers in Illinois. Railroads, factories, steel mills, big department stores and many other large employers have found it to their economic advantage to accept only healthy personnel and to develop facilities for protecting health after employment. No systematic method is practiced in Illinois for taking a health audit of teachers with whom the childhood of the state is in close and compulsory contact from day to day. Normal colleges are contact from day to day. Normal colleges are beginning to require physical examinations but less than one-half of the teachers ever go to normal schools." normal schools.

### Goiter in Connecticut

Information on the extent of goiter in various sections of the United States is rapidly increasing as the result of studies made by surgeons of the United States Public Health Service. These studies are now being extended to sections of the country where it is believed that thyroid en-largements are relatively infrequent because of the presence of iodine in the soil or water.

A recent study made by the Public Health Service in the State of Connecticut shows that here goiter is much less prevalent than in cer-tain sections of the United States. An examination in 28 localities of 12,405 children showed 2,347 thyroid enlargements, a percentage of 18.9.
Of these a considerable percentage was very slight and only a negligible number was decidedly marked. The studies showed that in no sections of the state the prevalence of goiter is dependent upon geological formations.

It is believed that health officers and physical states the prevalence of goiter is dependent upon geological formations.

It is believed that health officers and physicians in Connecticut need give no attention to the problem of goiter except to conservatively keep watch on the situation. Where cases are

found, it is recommended that children be placed under proper treatment. Care is especially advised about iodine treatment where it is probable that evil results might come from its use. THE PROGRESS OF THE ROCHESTER, N. Y.

#### VENTILATION TESTS

VENTILATION TESTS

Substantial progress is reported in the initial steps for making the Rochester school ventilation tests which were inaugurated by the Tuberculosis and Health Associations of the city, and with the cooperation of a special committee representing the American Society of Heating and Ventilating Engineers. The program was initiated by a special subcommittee composed of citizens of Rochester appointed to learn the facts about schoolroom ventilation under practical conditions. This committee which was a facts about schoolroom ventilation under practical conditions. This committee which was a subcommittee of the fresh air indoors committee of the Tuberculosis and Health Association of Rochester consisted of local educators, doctors, engineers, and professional men and women, with Dr. George T. Palmer, of the American Child Health Association of New York City, and Prof. C.-E. A. Winslow, of the Yale Medical School, New Haven, Conn., serving as consultants.

sultants.

In addition to these, the American Public Health Association and the American Society of Heating and Ventilating Engineers were called upon to act in a consulting capacity. For the latter society, Mr. Perry West of Newark, N. J., Mr. W. H. Carrier of Newark, Mr. A. R. Acheson of Syracuse, N. Y., Dr. E. V. Hill of Chicago, Mr. John Howatt of Chicago, Mr. Alfred Kellogg of Boston, Mass., Mr. Samuel R. Lewis of Chicago, and Mr. C. L. Riley of New York City were chosen to cooperate with the Tuberculosis and Health Associations, and the Rochester board of education in conducting the tests.

the tests.

The tests are planned to cover a two-year period and to afford accurate records of heating and ventilating conditions, as well as to indicate the health and comfort of the pupils in the schools, one to be operated with a system of direct radiation, window air supply and gravity exhaust; the second to be a split mechanical system with direct radiation, fan supply, and gravity exhaust. gravity exhaust.

The purpose of the tests is to determine the best system of ventilation for the school chil-

dren of Rochester and incidentally, to try to bring this important and much misunderstood problem nearer a solution for the benefit of every community. It is the aim of the investigators to evolve a plan permitting this to be done in a much more definite, scientific, and orderly manner than has previously been accomplished.

A definite code of interpretation of results is to be adopted by the parties concerned in the investigation, and the tests must be completed before definite conclusions may be drawn or results published. The final interpretation of the results will be based upon the quality of the ventilation and the health and comfort records of the pupils.

Two existing schools are being used for the

Two existing schools are being used for the tests and the board of education has done such tests and the board of education has done such remodeling as was practical to put them in shape for the tests. The committee of the American Society of Heating and Ventilating Engineers inspected and studied the school to be used for the mechanical system and presented its recommendations for the physical requirements to the Tuberculosis and Health Association's committee. The installation of the material and apparatus required for the tests was supervised by the building department of the Rochester board of education.

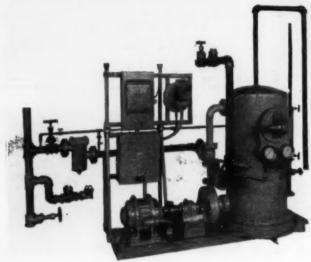
The system for the mechanically ventilated

The system for the mechanically ventilated school is a split system of heating and ventilating with humidification, partial air filtration, partial recirculation, and ozonation. This was considered the best arrangement under existing conditions in the building and the condition of the system now installed. Tentative suggestions presented to the board by the committee of the Tuberculosis and Health Association of Rochester, omitted the recirculation scheme and the provision for ozonation. provision for ozonation.

provision for ozonation.

With the recommendations made by the committee of the Society of Heating and Ventilating Engineers, it was believed that the limited boiler capacity would make accurate temperature control difficult in severe weather, without partial recirculation and that the operating cost would be considerably higher with a system where the entire air supply came from outside. In the interpretation of results as to the quality of ventilation supplied, it was felt that the factors of bacteria and dust could not rightly be





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In Young Pumps a highly efficient enclosed bronze impeller of the one piece type produces a positive pressure at a minimum consumption of current. The design of the Young Exhauster has also been worked out to secure an entirely adequate control of the stream, plus high air capacity, with the same small power outlay in the motor.

To accomplish these ends in a pump under varying load is no small task, yet Young has accomplished it. More than this, the Young Pump unloads the motor as the amount of condensation being handled diminishes. This also effects a marked economy in the operation of the pump. Yet with the by-pass fully opened the reserve power of the Young Pumps to discharge water is four times greater than the normal condensation rate of the system, revealing how easily the unit can take care of any peak load which it may be called upon to handle.

# Young Pump Company

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Factory: Michigan City, Indiana

disregarded, and that the ozone was particularly valuable for its sterilizing effect.

It is expected that the research laboratory of the Society will collaborate in the observation and preparation of these tests. It is planned to record and interpret the final results in an effective and scientific manner as soon as the several investigations have been completed.

-Erie, Pa. In response to a request of the state department of health, the Erie school state department of health, the Erie school authorities cooperated in conducting pre-school clinics for the examination of beginners previous to the opening of the schools. The clinics were conducted in two school districts and adequate publicity was given to acquaint the parents with the time and the arrangements for the examinations.

The examinations were conducted gratis, by a The examinations were conducted gratis, by a physician, assisted by a nurse designated by the local visiting nurse association. At one school, 48 children were listed for examination and 36 appeared. At the second school, 160 pupils were listed and only sixteen were presented for examination.

#### CHICAGO CORRESPONDENCE

CHICAGO CORRESPONDENCE

The Chicago public school system has never believed in subject supervisors. The unit system of supervision prevails. However, the board of education recently appointed a "supervisor of congestion," or practically so. Jacob H. Hauch, district superintendent and an authority in the organization and conduct of platoon schools, has been assigned the titanic task of untangling congestion in the Chicago schools and restoring every pupil to a full five-hour school day. Meanwhile an active newspaper debate has been going forward as to the actual seat shortage. Three figures have been given, namely, a shortage of 60,000 seats, 30,000 and 18,000. The last-named figure is derived as follows: Take the total number of seats in given, namely, a shortage of 60,000 seats, 30,000 and 18,000. The last-named figure is derived as follows: Take the total number of seats in Chicago schools including portable buildings, and subtract the total number of pupils in the system. The 30,000 figure takes account of the well-known fact that striking an average doesn't tell the truth about seat shortage. In some schools there are seats which are vacant because of low pupil membership, yet those rooms and seats cannot be moved to the congested schools. This figure still counts portable seats schools. This figure still counts portable seats

"seats". The figure 60,000 represents the shortage if seats in portable buildings are not counted as seats.

Three years ago the building fund tax rate was increased at a popular referendum in which the campaign slogan was "A Seat For Every Child". Apparently, the school authorities have abandoned hope of that.

"We cannot ever expect to actually eliminate all so-called seating shortage in the public schools," was the opinion of the superintendent and trustees, as expressed by Mrs. Helen Hefferan, a member of the school board. "But there is no reason why we cannot see that every until in the school bear the five hours." pupil in the schools receives the five hours of schooling each day to which he is entitled. No matter how long we go on building schools—and that must be permanently—it is practically sure that 10,000 or more Chicago school children will be housed in portable school buildings continually."

Under the leadership of R. C. Moore, secretary, and L. R. Grimm, research director, the Illinois State Teachers' Association is making a powerful attack on the inequality of educational opportunity throughout Illinois. Astounding inequalities have already been unearthed. The federal government has become interested. And the people of the state are being educated by a series of paragraph news talks on the schools series of paragraph news talks on the schools put out from I. S. T. A. headquarters. The fol-lowing statement, released on September 7, 1926, to all newspapers and teaching organizations in the state is perhaps typical:

"The public is beginning to understand that professional training is important for teachers as well as for lawyers and physicians.

"The new school fund apportionment law divides teachers into classes according to trainof two-year courses at the State Normal Schools, or their equivalent; Class B contains those with 36 weeks, or one year, of training; Class C, those with 18 weeks of training; and those without training are said to be unclassified.

"According to the official reports in 1925, there were great inequalities in the distribution of class A teachers. Of 1,103 rural teachers reported from 10 well-distributed counties, only 8.88 per cent were in class A. But in this same superior class were 15.29 per cent of the grade teachers in small village schools; 59.69 per cent in cities of 5,000 to 10,000 population; 78.42 per cent of the 5,463 elementary teachers in the 52 cities of ever 10.000 population (expense). in the 52 cities of over 10,000 population (excluding Chicago), and 96 per cent of the 9,010 full-time elementary teachers in Chicago.

The city health department has just completed its report for 1925 for its schools division. During 1925 fifty school physicians examined 148,000 Chicago school children, the majority of them being kindergarten and first grade pupils.

Children to the number of 110,000 were found to have various physical defects serious enough to warrant treatment.

101,000 were found to have defective teeth.

61,000 had diseased tonsils.
36,000 had defective eyesight.
33,000 were afflicted with adenoids.
27,000 were found to be undernourished, virtually starving in the midst of plenty.

2,610 were found to have heart trouble.

The various physical defects as enumerated are some of the factors that break down health or do not permit good health to get a start in the child.

Through the advice, encouragement and direction of the school doctor and nurse, working together, 43 per cent of these 110,000 defective children sought relief.

Dr. Herman N. Bundeson, health commissioner, adds this to the report:

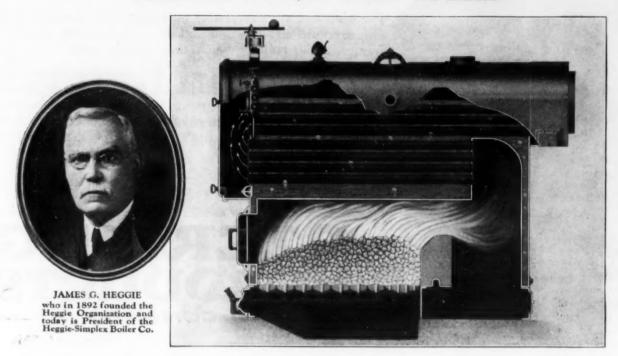
"Thousands have been cured and more thousands have been helped by the physicians and dentists of Chicago. More cooperation on the part of the parents and physicians is needed to make the correction of physical defects one hundred per cent. Have the child of pre-school age physically fit for school. Do it now."

The Chicago public school system is facing bankruptcy. There are two ways of increasing the revenues—by increasing property assessments or by raising the tax rate. The city council is attempting to raise assessments. There is considerable doubt whether that method, even if eventually successful, will pro-

(Concluded on Page 118)

# HEGGIE-SIMPLEX

ELECTRIC-WELDED STEEL BOILERS



# Combines All Advantages in Scientifically Engineered Unit

In its 34 years as builders of high grade boilers, the Heggie organization met all the traditions of boiler designing; as to combustion space, flue travel, heating surface, volume of water, steel vs. cast iron, etc.

But in developing the "Heggie-Simplex," these traditions were set aside for facts. Instead of traditions, the scientific principles of heat production and utilization were applied. The advantages and disadvantages of every previous type of heating equipment were considered. By this engineering approach, a boiler was produced which

combines in one portable electric-welded steel unit, sufficient combustion space to burn the fuel before the flues are reached, as much as 38% of direct heating surface, long gas travel, and a freely circulating body of water that assures quick steady heat without waste.

In the "Heggie-Simplex", you have—not a boiler based on traditions that involve inefficiency and inconvenience, but a scientifically engineered unit in which heat is developed and utilized in the most direct way to secure maximum advantages at least cost.

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Through the crack between window frames and masonry walls cold draughts seep into school rooms. You can seal these cracks wind and weathertight with Sterlastic shot in with a caulking gun. Caulking is easily accomplished and can be done during the school year-now.

Seal window and door frames tight to masonry walls with shock absorbing, tenacious and weatherproof Sterlastic Caulking Compound and you have taken the first easy step that makes school rooms warm, cozy, and healthful - in spite of winter's strongest winds.



For window frames invariably pull away from masonry walls with age, exposure and vibration. Take a look at the outside of the frames in your building where they join the wall.

Through this crack cold air, soot, germs and moisture work their way directly into school buildings. Just as caulking by shutting out this excess air makes the rooms warmer, it reduces heating costs. Rarely does caulking fail to pay for itself in one or two winters at the most in fuel saved. Write at once for full details and interesting information.



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Building Maintenance Paints and Specialties.

(Concluded from Page 116)

vide relief soon enough to save the schools. In view of the acute situation, the Chicago Principal's Club forwarded a resolution to the city council endorsing the assessment drive but calling for a tax levy referendum if the assessment method had not succeeded by September 15, 1926. The resolution in part follows:

"Whereas, the Chicago Principals' Club, through the efforts of its special secretary, Mr. Don C. Rogers, urged through the columns of the Chicago Daily News for October 21, 23 and 25, 1924, that an investigation be undertaken in Chicago to ascertain (1) whether the general Chicago to ascertain (1) whether the general level of property assessments was up to the legal rate and (2) whether the property assessments were properly equalized; and

ments were properly equalized; and

Whereas, since that time the need for such investigation has been fully justified by findings of a careful research study initiated and directed by said special secretary of the Chicago Principals' Club (reported in Service Bulletin No. 6 of the Chicago Principals' Club, copy of which is enclosed), a study in which a random sampling of 358 transactions wherein Chicago realty changed hands showed that the median ratio of assessed valuation (as found in the county assessor's books) placed on these 358 properties was found to be only sixteen per cent of their cash or market value (as recorded in the county recorder's office), when the state law requires a fifty per cent valuation—thus definitely proving the need of an increase in the general level of assessments; and

the need of an increase in the general level of assessments; and

Whereas, this aforesaid study further showed that of this random sampling of 358 cases 170, or 47 per cent of them, showed a ratio LESS THAN sixteen per cent (some even as low as one per cent)—thus definitely proving the need of equalization of property valuations for taxable purposes; and

Whereas the Chicago public school system is

Whereas, the Chicago public school system is in such dire financial straits, (1) that there has been an annual deficit every year but one since 1924, (2) that a huge floating indebtedness of \$21,400,000 has piled up, requiring an interest payment amounting to over \$900,000 per year, (3) that the school board is thus required by the necessities of the situation to run the schools on borrowed money, (4) that according to public

statements made by the school trustees the legal statements made by the school trustees the legal limit to the borrowing power is nearly reached, and, on the basis of present revenues in sight and present educational expenditures, the schools cannot go through the year 1927, (5) that despite desperate efforts at economy by the school board within the past year in an attempt to live within its income the floating indebted. school board within the past year in an attempt to live within its income, the floating indebtedness is still increasing, and (6) that the school rustees have publicly declared that unless additional revenues are provided at once, the schools cannot get through the year 1927 without some such drastic curtailment of school activities and consequent reduction of school efficiency, as closing down part of the regular school year, cutting teachers' salaries, or eliminating auxiliary agencies. iary agencies.

Whereas, the Chicago public school system must immediately have sufficient additional revenue (a) to end the annual deficit (b) to start gradually retiring the accumulated floating indebtedness, and (c) to provide adequate funds for normal expansion and legitimate school needs in a growing city; therefore, be it

Resolved, that the Chicago Principals' Club hereby endorses the efforts of the city council to induce the county board of assessors and board of review to equalize and raise Chicago property assessments; and, be it further

Resolved, that if sufficient school revenues for the heretofore mentioned purposes have not been provided through increased property assessments in the very near future, the City Council is urged to authorize a referendum at the November, 1926, general election to increase the educational fund tax levy rate from \$1.92 per \$100 of assessed valuation to \$2.92 as provided by law, and as adopted by the Board of Education on January 13, 1926, which resolution is now pending before the City Council, the justice of which is evidenced by the following reasons:

1. The maximum educational fund tax levy Resolved, that if sufficient school revenues for

1. The maximum educational fund tax levy rate in Chicago is now the lowest of any city in the State of Illinois.

2. Increasing the tax rate is a direct method of school relief—the state legislature intended that this method should be used and set up machinery for it, and furthermore, the 54th General Assembly has already intimated that Chicago can expect no financial relief for its

schools from the state legislature until it has availed itself of means now at its command, namely, the tax levy referendum.

3. If the people vote favorably in a referendum at the November election, the needed revenue will be provided in time to save the schools. Progress of equalization on assessments can go forward with unabated vigor, and if eventually successful, the full maximum levy need not be used.

The crisis in school affairs is so great that if the assessment plan has not produced the needed revenue by approximately September 15, 1926, the City Council is urged immediately to authorize a November, 1926, educational fund tax levy referendum at which the people of Chicago can take the responsibility of deciding by their votes the question of support of their schools.

votes the question of support of their schools. In his annual report, 1926, the superintendent of the bureau of compulsory education, Wm. L. Bodine, shows considerable optimism for the Chicago situation in spite of certain handicaps. A portion of his report follows:

"General attendance conditions at the public and private schools of Chicago continue to be the best among the large cities of the United States. Two recent national surveys—one in 1924 and the other in 1926—verify the unimpeachable fact that the Chicago average of general percentage of attendance (94.80) as compared to enrollment, leads the metropolitan group. group.

"New York is second with an average percentage of 92.47, Boston 92 per cent, Detroit 90.70 per cent, St. Louis 89.80 per cent, Los Angeles 89.69 per cent, Philadelphia 89 per cent, Pittsburgh 87.20 per cent and Milwaukee 83.50 per cent.

"London has one truant officer to every 2,500 pupils; New York has one officer to every 3,000 school children; Philadelphia has one officer to every 3,500 of its juvenile population, while Chicago has only one truant officer to every 6,500 of its school children. Chicago's 101 truant officers give attendance service to 327 public schools and branches, and 160 private schools."

"Teacher-clerks and junior library assistants.

"Teacher-clerks and junior library assistants, six and one-half hours per day, beginning thirty minutes before the opening of the schools and

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The HEATOVENT system is very flexible and is adapted to any type or style of building. It is easy to install, simple to operate, requires little space, and harmonizes with any interior. Old buildings in which no means of ventilation have been provided can be easily and readily equipped with the HEATOVENT system.

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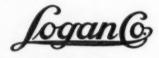
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# Wayne Stands for Safety

#### TEACHERS' SALARIES IN MASSACHU-SETTS

SETTS

The 1926 report on salaries of teachers, issued by the Massachusetts Department of Education, gives the salaries for four groups of teachers, indicating the maximum and average salary for each group. In group I, the highest salaries were paid in Boston and Springfield, while the lowest salaries were paid in Newbury-port and Woburn; in group II the highest salaries were paid in Brookline and Watertown, and the lowest in Franklin, Dartmouth and Whitman. In group III the highest salaries were paid in Barnstable, Monson and Wareham, and the lowest in Merrimac, Avon, and Douglas. In Group IV the highest salaries were paid in Tewksbury, Auburn, Dudley, and Acushnet, and the lowest in Southampton, Royalton, and Berkley. Berkley.

The report shows that the average salary for superintendents was \$3,170 in 1920, \$3,579 in 1921, \$4,342 in 1926, for superintendents not in unions; for superintendents in unions, the average salary for 1920 was \$2,292, for 1921, \$2,670, and for 1926, \$3,129. The median salary for all superintendents was \$2,950 for 1921, and \$4,000 for 1926.

The ratio of men to women teachers in the teaching force has risen from 1 to 1.5 in 1838 to 1 to 10.2 in 1910. In 1925 it was 1 to 7.5. The ratio of men to women in junior and senior high schools is as follows: Junior high schools, 1 to 7.3; senior high schools, 1 to 1.9.

Of 314 towns and cities reporting, 2,157 principals and full-time teachers new to the systems were employed during the school term ending in December, 1925. Of this number, 1,581 were elementary teachers and 576 were high school teachers. school teachers.

Of 301 towns and cities reporting, 1,494 principals and full-time teachers terminated their service during the year 1925. Of this number, 1,098 were elementary teachers and 396 were high school teachers. Of those who terminated their service, 746 left to enter other positions in Massachusetts; 88 left in order to retire from active employment; 63 left to enter other employments than teaching; 180 left to teach in other states and localities; 28 left because of disability, and 302 because of marriage.

## The Status of the Illinois Teachers' Pension

The Status of the Illinois Teachers' Pension Fund

A report has recently been issued on the condition of the Illinois teachers' pension fund at the close of its eleventh year of operation. The report shows that the fund had receipts of \$629,085, and disbursements of \$580,685, with a net gain for the year of \$48,400. The total number of teachers retired is 1,664, and the number receiving full annuity to July, 1926, was 1,379. The total number retired in 1926 was 126, comprising 41 men and 85 women. The number retired under disability was nine, composed of three men and six women. At the close of the school year in June, 1926, the cash on hand amounted to \$386,851, and the investments reached \$1,056,400, making the total assets of the fund \$1,443,251.

TITLES OF STATE SCHOOL OFFICERS
The titles of state school officials vary considerably as seen from a study made by Herbert M. Carle of the United States bureau of education and Ward G. Reeder of the Ohio University, covering the scope and function of the several state departments of education. The chief educational officers are designated in the several states under the following titles:

1. Commissioner of education.—Connecticut, Maine, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Rhode Island, Tennessee, Vermont.

2. Director of education.—Ohio.
3. State superintendent of education.—South

Director of education.—Ohio. State superintendent of education.—South Carolina.

Carolina.

4. State superintendent of free schools.—
West Virginia.

5. State superintendent of public education.
—Louisiana, Mississippi.

6. State superintendent of public instruction.
—Arkansas, Delaware, Florida, Idaho, Indiana, Kansas, Nebraska, New Mexico, North Carolina, Oklahoma, Texas, Utah, Wisconsin, Wyoming.

7. State superintendent of public instruction and director of education.—California.

8. State superintendent of public schools.—Missouri.

State superintendent of schools.-Georgia,

Maryland.

10. Superintendent of education.—Alabama.

Superintendent of public instruction.— na, Colorado, Illinois, Iowa, Kentucky,

Michigan, Montana, Nevada, North Dakota, Oregon, Pennsylvania, South Dakota, Virginia, gon, Penns Washington.

These titles have changed from time to time in the various states. The changes in four states, as shown in the above-mentioned study of Mr. Ward G. Reeder, will serve to illustrate:

New York. — Superintendent of common schools. Superintendent of supplies in the state of

New York. — Superintendent of common schools. Superintendent of public instruction. Commissioner of education.

Ohio.—Superintendent of common schools. Commissioner of common schools. Superintendent of public instruction. Director of education. Pennsylvania. — Superintendent of public schools. Superintendent of common schools. Superintendent of public instruction.

Utah.—Superintendent of primary schools. Superintendent of common schools. Superintendent of district schools. Commissioner of schools. Superintendent of public instruction.

#### RULES GOVERNING TEACHER SERVICE

RULES GOVERNING TEACHER SERVICE
The New York City board of education has under consideration the following rules which it is said will be adopted without further change:
"Each principal, teacher or other assistant shall perform the duties required of his position for the time indicated exclusive of the lunch period, and when not engaged in such duties shall perform such work as may be prescribed.
"(a) Elementary, junior high and probationary school principals, assistants to principal and teachers, regular and special—five and one-half hours per day, including attendance twenty minutes before the opening of the morning session and ten minutes before the opening of the fafternoon session, and for such additional time not exceeding forty minutes as the principal may require.

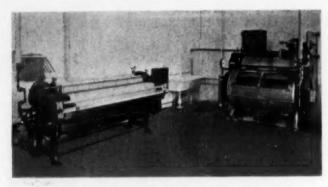
"Teachers of industrial subjects, six and one-half hours per day, including attendance twenty minutes before the opening of the morning ses-sion and ten minutes before the opening of the afternoon session.

"Teachers of agriculture, five and one-half hours per day for eleven months in the year, and for such additional time, including service on non-school days, within a maximum period of eight hours per day, as the principal, with the approval of the superintendent in charge, may



Pasadena High School, Pasadena, California. Architects-John C. Austin and Frederic M. Ashley, Los Angeles

# Why the Pasadena High School installed an "American" laundry



ne "American" equipped laundry at the Pasadena High School. A corner of the "American"

The Board of Education of Pasadena, California, was quick to appreciate the advantages of installing a laundry department in the magnificent new Pasadena High School. For having a laundry within the building has meant that linens for the cafeteria and domestic science classes can be cleaned and returned to service in quick time, and so only a relatively small stock is required. There is another advantage, too, in that athletic suits and towels may be laundered under the direct supervision of the school's educational department.

Engineers of The American Laundry Machinery Company who designed and installed the laundry at the Pasadena High School will be glad to advise you regarding your own laundry problems-without obligating you in any way. Have them tell you why more and more schools and colleges consider a laundry department an increasingly important adjunct. Write.

# The American Laundry Machinery Company

Norwood Station

The Canadian Laundry Machinery Co., Ltd. 47-93 Sterling Road, Toronto 3, Ont., Canada

Cincinnati, Ohio

Agents: British-American Laundry Machinery Co., Ltd. Underhill St., Camden Town, London, N.W.I., England

(Concluded from Page 118)

for such additional time not exceeding thirty minutes as the principal may require, and on such days when the schools are not in session as the superintendent of schools may require.

"(b) Visiting teachers and psychologists, seven hours on each school day and three hours

on Saturday morning.

"(c) Principals, assistants to principal and teachers in schools for the deaf—same as elementary schools.

High School Rules

"(d) High school principals, first assistants, teachers and teachers in training—Five hours and thirty-five minutes per day, including attendance twenty minutes before that part of the session which begins his school day, but not before 7:50 a. m., and for such additional time not exceeding forty minutes as the principal, with the approval of the associate superintendent in charge, may require.

with the approval of the associate superintendent in charge, may require.

"Teachers of Vocational Agriculture—Five and one-half hours per day for eleven months in the year, including attendance twenty minutes before the opening of the morning session, but not before 7:50 a. m., and for such additional time, within a maximum period of eight hours per day, as the principal, with the approval of the associate superintendent in charge, may require. require.

"Clerical assistants, junior clerical assistants, laboratory assistants, library assistants and teacher librarians, seven hours per day, and clerical assistants and junior clerical assistants on such non-school days as the superintendent of schools may require.

"Textile High Schools—Principals, first assistants, teachers of textile subjects, except applied textile design and laboratory assistants, clerical assistants and junior clerical assistants, seven and a half hours per day, from 8:40 a. m. to noon, and 12:50 to 5 p. m., and clerical assistants and junior clerical assistants on such nonschool days as the superintendent of schools may require. Teachers of applied textile design, trade mathematics, applied science and other subjects, six and a half hours per day, from 8:40 a. m. to 12 noon, and from 12:50 p. m. to 4 p. m. Teacher librarians and library assistants, seven hours per day, from 8:40 a. m. to 12 noon, and from 12:50 p. m. to 4:30 p. m."

A. C. Monahan, Formerly U. S. Bureau of Education

Recent Bureau of Standards Tests

Two recent tests of the U. S. Bureau of Standards on building materials are of special interest to school authorities. One has to do with the cement mixtures for concrete strengths; the other with weather proofing of gypsum.

Proportioning and Grading Aggregates for Concrete Strengths

The proportioning of materials to obtain a concrete of given strength at the age of 28 days is of considerable importance in the design of all concrete structures. The bureau is carrying out an investigation of the effects on concrete strength produced by variation in (a) the gradation of the coarse aggregate and (b) the ratio of fine to coarse aggregate when the coarse is deficient in certain sizes. To obtain data from typical aggregates, river sand is combined with three coarse aggregates, gravel, crushed limestone, and crushed slag. Cement ground from three different clinkers is being used with all combinations of the aggregates. Standard 6 by 12 inch strength cylinders are being tested at six ages, 1, 3, 7, and 28 days, 3 months, and 1 year. Three proportions, 1:1½:3, 1:2:4, and 1:3:6, are being used with the different aggregates.

In these tests the aim is to obtain the same

In these tests the aim is to obtain the same degree of consistency as judged by experienced operators and measured by means of the flow table and slump cone for each aggregate and each mix. To meet this condition it was found each mix. To meet this condition it was found that the crushed limestone and crushed slag required more water than the gravel. The concrete in all these tests is mixed to such a consistency that it would be suitable for reinforced concrete construction. The investigation is only partially completed, but is based on the results so far obtained, the following tentative conclusions may be stated:

(a) Relation of Strength to Water-Cement Ratio. In designing these mixtures standard

In designing these mixtures standard

28-day strengths were established. For the slag concretes all strengths were above the standard curve, and only one point fell below for the limestone concrete. For the gravel concrete several points fell below the curve but only slightly.

(b) Amount of Mixing Water and Consistency. All mixes were made to a consistency of approximately 95 as measured by the flow table. The amount of water required for any one gradation of any one aggregate was the same for all three proportions of mix. Some comparisons of the different cements indicate that there is a slight but persistent difference in the water is a slight but persistent difference in the water requirements of the cements. So far this dif-ference has not appeared as strictly proportional to the requirements of the neat cement for "nor-mal consistency." mal consistency.

(c) Proportions and gradation of Aggregates. In general, a uniform gradation of the coarse aggregates gave relatively high strengths. It appears safe to follow in the destrengths. It appears safe to follow in the design of concrete mixes the criterion that sand should be at least one-third of the total aggregate, and that gradation of the coarse aggregate should be such that the percentage passing some one sieve and retained on the next smaller sieve be not less than one-third of that retained on the former sieve and passing the next larger sieve.

When the laboratory work of this investiga-tion is complete the results will be studied further, and the data and conclusions prepared for

tion is complete the results will be studied further, and the data and conclusions prepared for publication.

Weatherproofing of Gypsum

About three and one-half years ago the bureau initiated an investigation of methods in increasing the weather resistance of gypsum. A detailed report of the procedure employed in attacking the problem was published in the Technical News Bulletin of February 10, 1925 (mimeographed). Since that report was published a number of changes have been noted in the cylinders and panels exposed, and the results seem to justify a progress report at this time. Several new cylinders and panels have also been made since February, 1925, and some of these show promise of good results. Gypsum, though satisfactory as a plaster and tile for interior work, has not proven satisfactory for exterior construction because of its slight solubility in water. If it could be so improved as to

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Alvernia High School

Plumber:
M. J. Corboy

Architects:
Brust & Phillips



Summit High School
Summit, N. J.
Plumbers:
A. Taafe & Co.
Architects:



Viroqua High School Viroqua, Wisconsin Plumbers: Smith Hardware Co. Architect: E. J. Hancock



Glassboro Normal School
Glassboro, N. J.
Plumbers:
Heat & Power Co.
Architects:
Guilbert & Betelle
Arnold H. Moses



Bronxville High School
New York City
Plumbers;
Moran Engineering Co.
Architects:
Guilbert & Betelle
Harry Leslie Walker



Woodrow Wilson High School New Rochelle, N.Y. Plumbers; George E., Gibson Co. Architects; Guilbert & Betelle

# Helping to Make Installation Costs Final Costs



HERE is an old proverb that runs, "All is not gold that glitters." This is especially applicable to plumbing. Beautiful white fixtures with shining brass fittings mean little until they have undergone the tests of time.

After a few years of service, plumbing begins to show its true value. Cheap, poorly constructed fixtures rapidly wear out and become useless. Then comes the expense of repair and replacement.

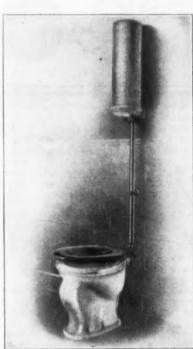
It is with this in mind that so many architects, plumbers, and school boards specify Clow for all plumbing.

All Clow equipment is carefully designed, manufactured according to exacting standards, and put through complete "set-up" tests before shipment. As a result, perfect quality, fit and operation are assured.

These things, in connection with an impressive list of Clow installations that are living through their fifth, tenth, and fifteenth year of service, show why Clow helps to make installation costs final costs.

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Clow Automatic Closet for Schools

CLOW

PREFERRED FOR EXACTING PLUMBING SINCE 1878

# "Health Bubblers" for School Needs



Rundle-Spence Vertico-Slant Sanitary Drinking Fountains are needed in the school building and on the school grounds. These "health bubblers" refresh and invigorate all who drink.

The contamination of lip-contact is automatically eliminated because lips can't touch the R-S nozzle. The slight slant stream prevents water from falling back upon the jet. Besides, R-S Vertico-Slant Fountains take up little space, check the waste of water and give continuous service over a period of years.

The R-S line includes Sanitary Drinking Fountains, Bath and Plumbing Fixtures and Supplies. Write for illustrated catalog with complete information.

> RUNDLE-SPENCE MFG. CO. 51 Fourth St., Milwaukee, Wis.

# UNDLE-SPENCE



Handsome vitreous china one piece fountain. Combines all the conveniences of the ver-tical stream with the special slanting stream feature. Glass slanting stream feature. Glass or cup may easily be filled from it.

C 147

A pedestal fix-ture of galvan-ized pipe with extra heavy vitreous China bowl and vertico-slant stream. An extra strong fountain for playground.



(Concluded from Page 122)

be more resistant to the weather, a new market for this material would immediately be opened.

Three general methods were used in attacking this problem.

The first method, that of covering the set material with a waterproof coating, has given some fair results with certain compounds. Paraffin steerie acid because discovered in head of the compound some fair results with certain compounds. Paraffin, stearic acid, beeswax dissolved in benzol, commarone resin, and certain waterproof coatings obtained from the open market have all proven fairly satisfactory. However, other waterproof coatings, such as tung oil varnish, bituminous paint, cromate paint, cellulose acetate, fish and hide glues, hot beeswax, and certain waterproof coatings obtained from the open market, have failed to show promise of increasing the weather resistance of gypsum.

The second method, that of precipitating on the surface an insoluble compound formed by the reaction of some material with the gypsum, has so far proven quite successful. Barium

the reaction of some material with the gypsum, has so far proven quite successful. Barium hydroxide, sodium silicate, and barium hydroxide, used in combination with silicic acid, have proven to be quite successful materials for increasing the weather resistance of gypsum. However, the use of alum as a material for weatherproofing gypsum by this method has not given encouraging results. given encouraging results.

The third method, by the addition of an inte-

The third method, by the addition of an integral waterproofing compound to gypsum, also seems to offer possibilities for the weatherproofing of gypsum quite successfully. Blood albumin glue, hydrated dolomitic lime, and several compounds obtained from the open market have, so far, given very promising results. However, tale, veneer glue, ammonium borate, and several other integral waterproofing compounds have not proven at all successful.

Another method, that of casting heat gypsum under pressure, indicates favorable results. The

under pressure, indicates favorable results. The dense gypsum cylinders have resisted the weather quite successfully for approximately two and one-half years without appreciable deterioration.

At present there are approximately 150 treated cylinders and 32 treated panels being exposed to the weather. Examination of these cylinders and panels is made from time to time. As new methods of treatment or new compounds come to the bureau's attention, cylinders are made and exposed for observation.

Pupil Traffic Patrols

High officials of the board of education and the police and traffic departments of the District of Columbia have developed a plan of introducing student traffic patrols to protect children from injury by automobiles on the way to and from schools.

A year ago a proponent of the plan from Chicago, where it has been in operation for several years, addressed the teachers of the public school system and Dr. Frank W. Ballou, superintendent of schools, appointed a committee, headed by Supervising Principal B. W. Murch, to study the applicability of the plan to the local system.

Murch, to study the Let the local system.

At that time the school officials consulted with the traffic and police department of the District government and these departments also have

government and police department of the District government and these departments also have made a study of the plan.

It was decided to police the street crossings near schools with uniformed policemen, until long after the opening of the schools when student patrols might be conveniently organized.

Monitors are appointed at each school, after teachers and students have been instructed in the dangers of traffic and how to meet them; the monitors act as amateur traffic policemen in guiding pupils across streams of traffic. The pupils are rotated in the position of monitors, so that the instruction is fairly general throughout the school. The traffic handling is made a

pupils are rotated in the position of monitors, so that the instruction is fairly general throughout the school. The traffic handling is made a part of the curriculum.

Professional Supervision in Rural Schools
The United States bureau of Education will distribute during the coming month a bulletin having to do with the improvement of instruction in rural schools through professional supervision. It is prepared under the direction of Mrs. Katherine M. Cook, chief of the Division of Rural Education, formerly State Superintendent of Public Instruction of Colorado. The bulletin discusses the most successful practices in school supervision both in state departments of education and in the offices of county superintendents of schools. The principal means of carrying out such supervision is discussed.

School Buildings in the District of Columbia
With the opening of the public schools in the District in September, four new elementary schools and two eight-room additions to existing schools were used for the first time. This means an opening of 56 additional classrooms.

These new buildings and additions are a part These new buildings and additions are a part of the five-year building program approved by Congress a little over a year ago. In addition to these construction is in progress on five buildings. These include the new McKinley Manual Training High School which will be completed in June, 1928, and 4 junior high schools, all of which will be ready for use approximately by New Year.

in June, 1928, and 4 junior high schools, all of which will be ready for use approximately by New Year.

Architects' plans have been prepared for 4 additional schools and contracts will be awarded so that the buildings may be completed by August 1, 1927. Money for their erection has been appropriated by Congress.

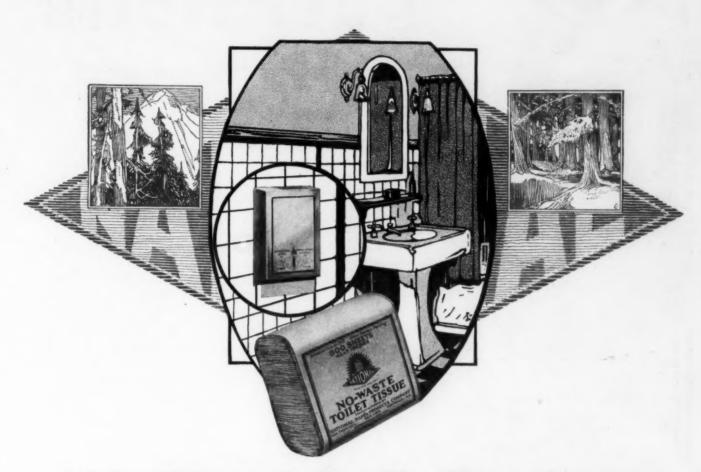
Supervision Personnel in the District of Columbia

With the opening of the school year two changes in personnel were effected in supervisory positions. Miss Ethel Bray was appointed Director of Drawing in the public schools of the District. She is a graduate of the Indiana State Normal School at Brazil, and of the University of Chicago. She holds an M. A. degree from Teachers College, Columbia University. She has had experience as a supervisor of art in the city schools of Brazil and has held a place as art teacher in the Indiana State Normal School. of art in the city schools of Brazil and has need a place as art teacher in the Indiana State Normal School. Miss E. M. Garger has been appointed supervisor of Geography in the Wilson Normal School, the District school for the training of teachers for its public school system. Miss Barger is a graduate of Columbia University and holds an M. A. degree from the same Institution Institution.
THE SCHOOL BUS DRIVER

THE SCHOOL BUS DRIVER

T. L. Head, assistant superintendent of Montgomery County, Alabama, tells in the Alabama School Journal what he learned during seven years of experience with school bus drivers. As a rule he finds them reliable and attentive to duty. In discussing the responsibilities of the driver he says:

"First of all, and most important of all, is care for the life of the child. The driver is expected to use every available means to protect the children intrusted to his care from accident. It need not be difficult for him to do this. He should know thoroughly the road over which the bus travels, and be able to approach cautiously every dangerous place in it. He should drive carefully over every portion of the road, and select instinctively the best places. He should (Concluded on Page 126)



# "No-Waste" Really Does Lower Your Maintenance!

#### National Paper Products for your building

"No-Waste" Toilet Paper The tissue that is soft, strong and absorbent. 800-sheet packages. 125 packages to fibre cartons. Nickel, green or white cabinets leased.

"Public Service" Towels Regular and Junior sizes. 150-towel packages; 25 packages to carton. Sheet metal cabinets in white or olive green.

"Toiltex"-in Rolls

1000 counted sheets in a sanitary wrapped package for the home. Same quality as "No Waste" and made from clean spruce wood only.

ACTUAL practice tells the story! Better than we can tell it. Better than any salesman could tell it! Record after record has been brought to our attention where savings-with "No-Waste" and "Public Service" towelshave averaged from 20% to 30%!

"No-Waste" is dispensed only two sheets at a time from theft-proof cabinets. Like "Public Service" towels, "No-Waste" is made from clean, virgin spruce pulp only—under model conditions of sanitation.

Standardize on National washroom paper products in your office, building or institution. Thousands have found it economical. Send for literature and samples today. National Paper Products Co., 72 Furnace St., Carthage, N. Y.







# Partitions

# Meet Every Requirement

Partitions are built because they are primarily a necessity in the building in which they are to be used.

On the type of Partition desired, should be focused the real interest of the Purchaser and Specifier.

Of first consideration is the matter of material.

#### Wood, Marble or Metal

WOOD-expensive to install-to maintain-to protect against abuse, fire, odors, dirt and disease.

-expensive to use, impracticable for general use, prohibitive where alterations are desirable.

METAL—essentially fire-resisting, odor proof, and manifestly germ and dirt proof. Inexpensive to use and erect. Easy to alter.

### If Metal—why Mills Metal?

The reasons are too numerous to mention in detail. Its design will interest you. Its special sanitary features are exclusively its own. Its appearance and sturdy construction are unique. Its adaptability sufficient to meet every need. Its cost is as low as its value is high.

The Mills ompany

WAYSIDE ROAD AT NICKEL PLATE R R.

CLEVELAND, OHIO

(Concluded from Page 124)

be careful in loading and unloading his children.

(Concluded from Page 124)

be careful in loading and unloading his children. He should flag every railroad crossing when there are children in the bus.

"The good driver will be interested not only in the life and the health of the boys and girls who ride in his bus, but he will be interested in the care and upkeep of the bus which he drives. He desires to drive the bus as economically as it can reasonably be driven. This means that he will be careful not to use any more gas and oil than is necessary, and he will not start with a jery nor stop suddenly and break parts of his bus. He will examine his tires regularly and see that they are properly inflated."

Mr. Head believes that those in charge of pupil transportation must check up occasionally on the service. Among the questions he proposes are the following:

"How are the children loaded and unloaded? Surely there is some plan, because a good principal will either see the busses loaded and unloaded himself, or will certainly have one of the teachers attend to this duty for him. The principal will, at least occasionally, follow the busses out and ascertain the conditions under which the children ride. Do they run to the road as the bus approaches and scramble to reach the steps of the bus? If they do, the driver is likely to be a poor disciplinarian; and if with the help of the administrator he can't change the situation, a mistake has been made in selecting him to drive.

"How does the driver react to the rule requiring that every railway crossing be flagged? Surely, there is such a rule. Is the crossing flagged mechanically, or does the driver appear to be in earnest? It is very easy to determine his attitude by simply observing him pass over a railway track.

Is the administrator a good judge of a road? If he is, he need not go out very far on the route of the driver to make a check. Watch his

Is the administrator a good judge of a road? If he is, he need not go out very far on the route of the driver to make a check. Watch his route of the driver to make a check. Watch his attitude toward the bad places in the road. It will be easy to determine if he has formed a habit of choosing the best places in which to put the wheels."

While safety is the principal consideration, Mr. Head also points the health side of the transportation service. He says: "If the schedule calls for the child to be on the roadside at

7:55 a. m., and the bus does not come until 8:15 a. m., the child has had to stand and wait. The weather may be wet and cold, the ground damp and disagreeable, yet the child must take it. If shoes are wet, they must be worn just the same. It is not difficult to check the schedule; all that is necessary is to have a report upon which the driver indicates the time he reached every home. The making of this report will serve to caution the driver that he is bound to the duty of getting the children, promptly, to their destination. If the child is required to stand thirty minutes on the damp, cold ground, he might as well walk

to school, and the State do without expensive

to school, and the State do without expensive transportation which is inefficient.

"In our southern climate, it may not be necessary to artificially heat school busses, but it is essential that they be dry. A bus left out in the weather at night is unfit for children to ride the next morning."

NEW STANDARD TYPE OF SCHOOL BUILDING

BUILDING
The Chicago board of education has been asked to approve a new standard type of school building which has been worked out by the (Concluded on Page 129)



TOKYO KINDERGARTEN TEACHERS OF LONGEST SERVICE ARE REWARDED BY THE MINISTRY OF EDUCATION. LEFT TO RIGHT: MRS. KUNI MOCHIZUKI OF KOBE, MRS. MAKIKO ZAN OF OSAKA, AND MRS. FUSA TANAKA OF TOKYO.



# IMPROVED PANICEXIT LOCKS

Smith's Improved Exit Locks Are the Best Locks Made for Schools, Theatres, and Industrial Plants



No. 70-Exit Only.



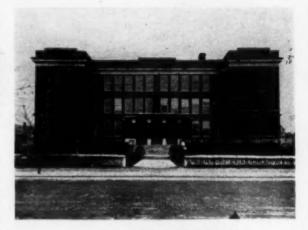
No. 736-Handle and Cyl. No. 737-Knob and Cyl.

#### The GRAVITY Principle

Our Gravity Exit Lock is the most perfect Me-chanical Expression of the Exit Lock Idea that has ever been developed. It is the Exit Lock with Two Locks and without a single Spring in either Lock.

#### The LEVER Principle

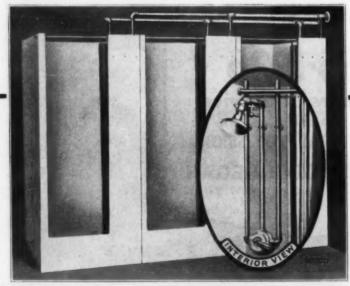
It is the Exit Lock with Lever Action at the Cross-bar to open the Door. There is No Door. There is No Spring Action and No Spring Tension. It is the One Exit Lock of Unfailing Operation, built on Everlasting Principles for Everlasting Service.



One of the 34 Cleveland Schools recently equipped with "Smith's Improved" Panic Exit Locks

The Steffens - Amberg Co. New Jersey

FOR CATALOG



# NIEDECKEN SHOWER STALL

FOR SCHOOL INSTALLATION A LEAK PROOF FIXTURE

Which Can Be Set in Batteries of Any Number

The walls of the stall are made of a continuous sheet of No. 10 gauge copper bearing steel which with the riser are welded to a dished bottom with waste outlet in center.

After installation is completed, the interior and exposed exterior must be finished in water proof enamel paint.

Write for Bulletin S.B. 15X

HOFFMANN & BILLINGS MFG. CO.

# Bradley -Washfountains

PROMOTE BOTH CLEANLINESS AND SANITATION

REQUIRE BUT A MINIMUM OF JANITOR SERVICE

#### "The First Cost

is the Last Cost"

Bradley Washfountains represent a great advance in modern washroom equipment. They promote both clean-liness and sanitation, are self cleaning and require but a minimum of janitor

And Bradley Washfountains are most economical. Their use reduces the number of fixtures required. They save floor space, use less water, and permit the use of fresh tempered water at all times.

For use in Schools, Colleges and Universities and in every type of public lavatories, there is no fixture equal to the Bradley Washfountain in utility, durability and beauty and in economy of operation and mainte-

Write for Catalog

# Bradley Washfountain Co.

Milwaukee, Wisconsin



# A FEW SCHOOL INSTALLATIONS

A FEW SCHOUL
INSTALLATIONS
Crane Technical High School,
Schurz High School,
Schurz High School,
Austin High School,
Morgan Park School,
Chicago, Ill.
Garvey School,
Los Angeles, Calif.
Theodore Roosevelt Junior
and Senior High School.
Amsterdam, N. Y.
Marquette University,
Continuation School,
Milwaukee, Wis.
Fortuna Grade School,
Fortuna, Calif.
Washington Ave. High
School,
Canton, Ohio
High School,
Green Bay, Wis.
Fond du Lac, Wis.
South Omaha, Nebr.
Woodland Union High School,
South Omaha, Nebr.
Woodland Union High School,
Oneida, Wis.
Great Neck, L. I.
High School,
Great Neck, L. I.
High School,
St. Charles, Ill.
AND MANY MORE.

wi



The Name to look for on Plumbing Fixtures



Pressure tank closet with vitreous china juvenile height (14 inches) syphon jet bowl with extended front lip. Patent Auto-matic seat operating valve, galvanized matic seat operating valve, galvanized iron pressure tank with bracket shelf and brass flush pipe with holder and double rubber bumper. All exposed brass trimmings heavily nickel



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### PIONEER MANUFACTURERS OF PLUMBING FIXTURES FOR SCHOOLS

(Concluded from Page 126)
board's architect, and which takes into consideration educational principles and policies, area of building, elasticity of plan, and economical cost of structure.

In developing the plan, the architect has been governed, first by educational requirements and policies; second, endeavoring to incorporate in such plan, principles applicable to all school buildings, namely, safety in construction, adequate natural light, ventilation and a maximum safety obtained in the correct location in numbers of stairways and corridors, as well as the elimination of any features which have in any elimination of any features which have in any way proved impractical or unnecessary; thirdly, by a well developed plan; reduce non-instruc-

way proved impractical or unnecessary; thirdly, by a well developed plan; reduce non-instructional space to a minimum, thereby achieving real practical economy.

The proposed new building is to be "U" shaped in form and three stories in height, and will contain thirty-one classrooms, including art room, manual training room, kindergarten, principal's office, and other necessary appurtenances, with an assembly hall and gymnasium.

The arrangement decreases area to be occupied by building from 368' frontage, required at present for type B-1 building to 235' frontage for the proposed new unit. This decrease permits placing of building and facing it in any direction desired, on a standard 266' city block.

The elasticity of the building plan has been given careful consideration in order that building may be readily adapted to necessary changes or expansion of any unit or group of units, with a minimum expense. The plan is so arranged that a part or combination of parts may be built as the initial structure.

The power plant has been made a part of the building instead of as at present, a separate building connected to the school by tunnel. Its proposed location is in the center at the rear of the building, in order to provide the most economical arrangement for mechanical equipment. Without in a minimum expense.

building, in order to provide the most econical arrangement for mechanical equipment.

omical arrangement for mechanical equipment. Without in any way causing any restriction in the number of stairways, or sacrificing any corridor space which might impair the safety of the building, main corridors have been reduced in width from 14' to 11' and secondary corridors from 14' to 10'. Main corridors are open to natural light on one side.

Balcony in assembly hall has been eliminated.

Balcony in assembly hall has been eliminated without reducing the seating capacity, thereby

making it possible to decrease the height of the same, permitting the introduction of classrooms above the assembly hall on the same floor levels as balance of building.

Boys' and girls' locker rooms in connection

Boys' and girls' locker rooms in connection with gymnasium have been omitted.

Everything considered, the three-story plan is more economical than the two-story building. The two-story unit, in the opinion of the architect, presents no outstanding educational adventages.

While it is difficult to present a set of definite While it is difficult to present a set of definite figures, as to cost of proposed new building, in the opinion of the architect, it is reasonably safe to assume that the proposed unit can be constructed for a sum not in excess of \$500,000. It may be of interest to compare this with the cost of the present two-story type of building, presenting as an illustration, the Palmer, Sutherland, Peck and the Lyon Schools. The cost of each one of these buildings, without equipment, averaged \$465,000 to \$485,000.

SCHOOL ADMINISTRATION NOTES

The Oak Park high school fraternity trouble has been settled finally. The 74 boys, suspended early last May, may return to school. They, their parents, and their attorneys signed up to the following stipulations, in return for the privilege of once more entering high school:

1. All law suits to be withdrawn, and no new ones instituted.

2. A petition seeking the removal of the principal to be destroyed.

3. Admission by the boys that they were wrong in joining secret fraternities, a pledge to refrain from joining any others, and a promise to attempt to disuade other boys from organiz-

ing or joining any.

4. None of the boys are to represent their school in athletics, in class offices, or in any extra-curricular activities until May, 1927, otherwise they are to be permitted to return to school work without prejudice.

5. The seniors who would have graduated last June are to be given diplomas as soon as they have made up about three weeks of work.

-A school row which developed in the Springdistrict, near Leavenworth, Kansas, has dits way into the courts. John Schwinn and W. R. Jeffries have filed an action asking

for a permanent injunction against J. A. Mohan, Mike Bott, and Mary Lenahan. The petition recites that Schwinn was duly elected as secretary and Jeffries as treasurer, and that Mohan has refusd to turn over the books. The complainants also ask that they be reimbursed for the legal costs.

Chicago spent a fortune in school repairs last summer. According to John Byrnes, business manager, "the board of education spent approximately \$800,000 for repairs and alterations on school buildings in preparation for the fall school opening in September. All the schools have been renovated and repaired. Repair work on 41 school buildings alone totaled \$454,700. This work included the rebuilding of smokestacks, calcimining, grading yards, repairing fences or else replacing worn ones with new, masonry, shellacking desks and the like."

TEACHERS' SALARIES

TEACHERS' SALARIES

-Chanute, Kans. A new salary schedule has become effective this fall. The salaries, under the schedule, are on an annual basis and are paid in ten installments, the first installment falling due with the opening of the schools. Credit is allowed for satisfactory experience and for additional training obtained by the

teacher.

—Under the single salary schedule plan, in force in the schools of Ithaca, N. Y., a teacher in any grade or department, may raise her own salary \$450 above the maximum. By superior excellence in her daily work, the teacher may secure the eight annual increments in much may secure the eight annual increments in much

may secure the eight annual increments in much less than eight years.

It is provided also, that a teacher after twelve years of service may be granted a leave of absence for half the school year at one-half salary, provided she has obtained the four advanced study increments, that she agrees to remain in the system for three years, and that the course of study and travel are approved by the superintendent. Thereafter, any teacher may be granted a leave of absence for study or travel for each additional seven years that she remains in the system.

The new schedule provides service increments, the annual increment for those in service thirty years and less than forty years being

vice thirty years and less than forty years being \$100 and for forty years' service \$200.

# The pet Nemesis of an economical school board e-l-i-m-i-n-a-t-e-d

E VERY OTHER part of a school building is built for years of service and low deprecia-But the cost of replacing WINDOW SHADES has always been worrisome. Formerly this expense was regarded as a necessary evil, simply because nothing better than old-fashioned, non-washable shade cloth was known until the appearance of Tontine. With Tontine Shades it is possible to renew the school shades by simply washing them. All the dust, dirt, and finger marks are completely washed away and Tontine Shades are restored to their original color and newness. Tontine Shades do not fray, crack, check, or wrinkle. Here's the reason: Tontine Shades are impregnated with pyroxylin (the same as Duco).

There's always a cheaper shade-cheaper for a while-but Tontine Shades are the most economical if you're figuring by years of service.

E. I. DU PONT DE NEMOURS & CO., Inc., Newburgh, N. Y.

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ized, and during the last summer session about 700 were immunized.

—The installation of a time clock has been proposed by Supt. H. S. Cox of Covington, Ky., in order to avoid disputes regarding the time reported by teachers. Supt. Cox called attention to a rule providing that teachers more than fifteen minutes late must lose one-quarter of a day's nay day's pay.

—St. Clair, Mich. The board of education has adopted an accounting system approved by the Michigan Teachers' Association for use in the schools of the state. Mr. F. O. Grounds, superintendent of schools, will be in direct charge of the accounting department, and all records will be concentrated in the superintendent's office. A bookkeeper and office secretary has been employed to assist the head of the department.

Vandalism was rampant in certain districts during the summer. In one instance, the repair department had submitted a bill of \$2,500 for repairs at the Wells School at 936 N. Ashland

repairs at the Wells School at 936 N. Ashland Avenue.

—The Hackensack, N. J., board of education threatened expulsion of twelve girls who had formed a secret society in violation of the Dater law which forbids high school fraternities. At a hearing held it developed that the organization had been disbanded, in consequence of which the board withdrew its threat.

—The school board of Calhoun County, Florida, has adopted the following rule: "No teachers who dance or encourage same shall be allowed to teach in the public schools of Calhoun county if said dancing is participated in at any time from Monday to Friday night. All teachers will be required to sign a contract agreeing to conform to this rule." Members of the board declare that of late many school teachers have been tripping the light fantastic to an excessive degree, with damaging results to the progress of their pupils.

—Lynn, Mass. The school board is considering a new rule, which will automatically dismiss janitors addicted to the use of liquor, and women who smoke cigarets.

—Duluth, Minn. The school board has voted.

who smoke cigarets.

—Duluth, Minn. The school board has voted salary increases totaling \$8,400 a year and affecting 84 grade and junior high school teach-

ers.

—A departure from the usual type of general teachers' meeting was effected at Augusta, Kansas, the past year, when in place of an address by the superintendent of schools, the president of the board of education, a banker, a superintendent of a refinery, and a mother each gave a talk on the subject, "constructive criticism of the public schools." The talks were brief, but straightforward, and to the point. All members of the board were present, with the exception of one, and were given a chance to meet the teachers.

—During the past two years more than 1.500

to meet the teachers.

—During the past two years more than 1,500 teachers at the Southeastern Oklahoma Teachers' College have been given the anti-typhoid vaccine. The work was supervised by the state health department, and the vaccine was furnished without charge. During the previous summer sesion, 835 teachers were thus immun-



125 YEARS' SERVICE AT ONE SCHOOL, REMARKABLE RECORD OF FIVE PEOPLE.

The three head teachers and two caretakers of Bowes-road Council School, Bowes Park, New Southgate, England, have the unique distinction of having been connected with the school for twenty-five years each. Nearly 10,000 children have passed through their hands during this time.

The group; left to right, includes: Mrs. Caves, assistant caretaker, Miss King, Miss J. E. Goodwin, headmistress of the girls' school, Miss Wills, infants' school, and Mr. H. W. Richardson, headmaster of the boys' school, who all have completed 25 years' service.

Partial List of Hockaday Users

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ADVERTISEMENT NUMBER THREE OF A SERIES



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# Schoolhouse Construction Review

#### What Inventories Show

Schools take stock just as a business must, but the starting point is different. The United States Bureau of Education has just published the Statistics of City School Systems for 1923-1924, which is our latest inventory record of city schools. Of course, the Bureau must tabulate figures showing the growth and progress of management as well as "product" in process of manufacture. The figures are interesting and Mr. Frank M. Phillips, chief of the Statistical Division has again proven the efficiency of his department, keeping in mind his great difficulty with sources of information.

The most interesting inventory figure in the bulletin shows the present value of school property as representing capital investment, itemized for the most part as "plant and equipment."

# BONDED INDEBTEDNESS AND TOTAL SCHOOL EXPENDITURES, 1923-1924, OF FIFTY LARGEST CITIES

		School Bonds	Total School
	City	Outstanding	Expenditures
1.	New York City	\$181,203,000	\$146,806,840
2.	Chicago, Ill	. No Figure	72,094,156
3.	Philadelphia, Pa		31,102,257
4.	Detroit, Mich.		31,188.952
5.	Cleveland, Ohio		19,401,643
6.	Los Angeles, Calif	32,610,000	31,697,938
7.	St. Louis, Mo		10,483 893
8.	Baltimore, Md		13,672,630
9.	Boston, Mass		16,673,522
10.	Pittsburgh, Pa		12,119.705
11.	San Francisco, Calif.	. 11,475,000	7,689.173
12.	Buffalo, N. Y	. 17,467,000	12,379,701
13.	Milwaukee, Wis	6,238,000	7,873,852
14.	Washington, D. C		6,810,993
15.	Newark, N. J		9,492,923
16.	Minneapolis, Minn		10,924,349
17.	New Orleans, La		4,019,340
18.	Seattle, Wash		5,867,671
19.	Cincinnati, Ohio		6,861,769
20.	Kansas City, Mo	13,287,000	8,674,450
21.	Indianapolis, Ind Rochester, N. Y	10,102,000	6,451.122
22.	Rochester, N. Y	9.840,000	8,796,631
23.	Jersey City, N. J Louisville, Ky	13,445,000	6,026,031
24.	Louisville, Ky	. No Figure	2,451,674
25.	Toledo, Ohio		6,187.421
26.	Portland, Ore	2,525,000	5,908,606
27.	Denver, Colo		6,609,225
28.	Columbus, Ohio		6,018,731
29.	Providence, R. I		4,149,705
30.	Oakland, Calif	5,113,000	5,740,766
31.	Atlanta, Ga	No Figure	5,011,464
32.	St. Paul, Minn	5,046,000	4,964,668
33.	Omaha, Nebr	8,491,000	5.533,704
34.	Birmingham, Ala	4,051,000	1,719.136
35.	San Antonio, Tex	3,475,000	3,717,040
36.	Akron, Ohio	6,790,000	4.103,516
37.	Dallas, Tex	No Figure	2,756.985
38.	Worcester, Mass	1,465,000	3,913,920
39.	Richmond, Va	. No Figure	1.949.805
40.	Syracuse, N. Y	. No Figure	2.085.081
41.	New Haven, Conn	No Figure	2,535,452
42.	Memphis, Tenn	4.533,000	2,217,325
43.	Dayton, Ohio	4.867.000	3,487.058
44.	Norfolk, Va	No Figure	1.912,138
45.	Houston, Tex	2,288,000	2,250,812
46.	Hartford, Conn	6,733,000	3,970,257
47.	Youngstown, Ohio	4,883,000	3,093,977
48.	Fort Worth, Tex	2,341,000	1,616,384
49.	Grand Rapids, Mich.	4,041,000	4,393,246
50.	Bridgeport, Conn		3,080,248
-			

Figures from U. S. Bureau of Education, Bulletin (1925) 41.

The list of the fifty largest cities is given in the accompanying table with the school population of the community to suggest the variation of capital investment as compared with the number of children served. A listing of cities by capital investment might prove very annoying to some City Fathers who annually prate about "our bill for education."

Several of the cities rated low on the list have very recently voted large bond issues which in

time will change the totals very materially. Louisville recently has voted a five million dollar bond issue: New Orleans is completing some excellent buildings; the totals will be changed in many communities which are now engaged in new financing and building operations. The continued growth and progress of school construction in all cities, is the very best proof of the improvement in capital investment for education in all cities.

The figures show very definitely that cities with the most far-seeing school construction programs and with definite policies for school expansion show conclusively the results of a good, substantial progress in educational interest. The idea of ten or twenty year school construction and school expansion programs is becoming each year more practical and workable and necessary. The comparative figures show conclusively outstanding results and progress.

#### School Bonds Outstanding

The record of school bonds outstanding as of 1923-1924 is equally interesting. Here again many of the figures have been changed by the bond sales of the past eighteen months. A definite retirement program has reduced, outstanding bond issues in many cities. Cities with no outstanding bond issues, or very low outstanding bond issues, show comparatively small progress in schoolhouse growth. Chicago is an exception to this general condition because, while it has no bonded indebtedness, there is a floating debt of \$14,000,000.

The present volume of school bonds outstanding is most impressive proof of the great expansion which followed the inactivity of the war years. The country is enjoying prosperity beyond all belief. We are a nation of workers and producers, and our ability to save and enlarge our capital investment has exceeded all experience in the history of the world. The ratio of bonded indebtedness to the value of the school plant is worth studying and shows a

### IMPORTANT SCHOOL BOND SALES OF THE

PAST MONTH.	
(August to September)	
FLORIDA—St. Johns Co., Spec, Tax Sch. Dist. No. 1, Robert B. Meserve, Supt., St.	
Augustine, Fla	10
Sch. Dist. No. 1, W. L. Walling, Supt., Grosse Pointe, Mich	0
NEW JERSEY—Elizabeth, School, Ira T.	10
Chapman, Supt	Ю.
Series No. 1, Frank G. Pickell, Supt 1,517,00 NEW YORK—Oneida, City Schl. Dist., H.	
Claude Hardy, Supt	
tion, Dr. Wm. O'Shea, Supt	0
NEW YORK—White Plains, School, John W. 550,00	00
Lumbard, Supt	
Rhys Powell, Supt	
Stilwell, Supt. 300,00 WISCONSIN—Wausau, School, S. B. Tobey.	
Supt 380,00	

### SCHOOL POPULATION AND SCHOOL PROPERTY

			Value
		School	of School
	City	Population	Property
1.	New York City	1,095,284	\$249.844.000
2.	Chicago, Ill	459,109 .	98.135,000
3.	Philadelphia, Pa	301,235	61.086,000
4.	Detroit, Mich	178,456	54,498,000
5.	Cleveland, Ohio	153,982	39,794,000
6.	St. Louis, Mo	122,000	25,317,000
7.	Baltimore, Md	107,232	15.874.000
8.	Boston, Mass	138,196	33,919,000
9.	Los Angeles, Calif	194.227	47.332.000
10.	Pittsburgh. Pa	105,122	28.637,000
11.	San Francisco, Calif	70,877	21.259,000
12.	Buffalo, N. Y	75,254	
13.	Milwaukee. Wis	73,270	19,479,000
14.			15,531,000
15.	Washington, D. C	71,974	14.252,000
	Newark, N. J	83.974	15.546.000
16.	Minneapolis, Minn	77,708	19,391.000
17.	New Orleans, La	55,981	5,588,000
18.	Cincinnati, Ohio	53,876	18,100,000
19.	Kansas City, Mo	65.271	18,559.000
20.	Seattle, Wash	55,156	13,637,000
21.	Indianapolis, Ind	54,255	14,482,000
22.	Jersey City, N. J Rochester, N. Y	48,192	15,423 000
23.	Rochester, N. Y	48,673	19,310,000
24.	Portland, Ore	52,666	11,301.000
25.	Denver. Colo	56,583	11,682,000
26.	Toledo, Ohio	40.515	13,935.000
27.	Providence, R. I	44.306	8,732,000
28.	Columbus, Ohio	40,769	12,001,000
29.	Louisville, Ky	39.850	5.619,000
30.	St. Paul, Minn	39 571	9,221,000
31.	Oakland, Calif	48,473	10,551,000
32.	Akron, Ohio	32,593	11,606,000
33.	Atlanta, Ga	45,112	6.090,000
34.	Omaha, Nebr	39.052	15,555,000
35.	Worcester, Mass	41.948	6,420,000
36.	Birmingham, Ala	42.949	4,405,000
37.	Syracuse, N. Y	27,409	6,728,000
38.	Richmond, Va	30,552	4.953,000
39.	New Haven, Conn	33.984	5,132,000
40.	Memphis. Tenn	33.648	4.621.000
41.	San Antonio, Tex	27,884	4.882.000
42.	Dallas, Tex	39.297	No Figure
43.	Dayton, Ohio	26 405	6.857.000
44.	Bridgeport, Conn	25,833	4.347.000
45.	Houston, Tex	30.274	8,633,000
46.	Hartford, Conn	27.807	13,224,000
47.	Scranton, Pa	27.779	10,224,000
48.	Grand Rapids Mich	23 880	7.749.000
49.	Paterson, N. J	25.561	1, (227,000)
50.	Youngstown, Ohio	30.643	6,507,000
50.	Toungstown, Omo	00,0%	0,007,000

Figures from U. S. Bureau of Education, Bulletin (1925) 41 strength only possible in a young and virile country

The low rate of interest which school bonds enjoy is of course, the real explanation for our great expansion. At the present, school bonds are selling at prices which net 4% to 4.25% for the older and larger cities. In small communities and in certain boom sections rates as high as 41/2%, 5%, and even 6% prevail. While the rate is highest in states where speculation is still uppermost in the minds of the people, bonds as good as federal government bonds are being purchased at most attractive rates of interest.

—An important decision etsablishing the power of the New York State Commissioner of Education to direct boards of education to furnish transportation for school children has been rendered by the Court of Appeals of New York. The case arose in Brookhaven, Suffolk County, where the Appellate Division annulled a decision and order of the state commissioner on furnishing transportation.

The court, in rendering its decision, pointed out that the education law of the state permits the formation of small school districts into union school districts, and that with the formation of the union district, the board of education has "broad powers" to the end that all the children may be educated. It is further pointed out that the object of union districts is to provide better instruction for the children in attendance, and that this is impossible without adequate transportation for pupils living at a distance. Provision for transportation is as obvious a duty as to provide heat for the building.

TABLE I. SCHOOL BOND SALES AND SCHOOL HOUSE CONSTRUCTION CONTRACTS FOR 1923-1926

1.		1923			1924			1925			1926	
Month	School Bond	CONTRAC	CTS LETS	School Bond	CONTRA	CTS LET2	School Bond	CONTRA	CTS LET2	School Bond	CONTRA	CTS LET2
	Sales <sup>1</sup>	Sq. Feet	Value	Sales	Sq. Feet	Value	Sales <sup>1</sup>	Sq. Feet	Value	Sales <sup>1</sup>	Sq. Feet	Value
Jan Feb March April May June July Aug Sept Oct Nov Dec	\$ 36.673,115 17.152,130 19.496,025 22.141,375 39.580,999 28,896,163 32,497,952 9.691,000 10,661,101 21,571,341 30,054,948 21,474,361	2,153,000 3,992,000 4,092,000 5,849,000 3,949,000 4,131,000 3,285,000 2,364,000 3,907,000 3,529,000 3,464,000	\$ 13,906,000 22,108,000 22,550,000 35,822,000 24,346,000 27,512,000 21,036,000 21,923,000 21,722,000 25,468,000	\$ 20.008.462 40.828.295 37.021.484 27.705,696 17.809.213 36.325.100 18.645.980 26.129.566 17.103.872 12.475.106 15.820.570 38,713.245	3,114,200 5,839,000 5,748,000 5,757,000 6,908,000 6,150,000 4,401,000 4,857,000 4,127,000 2,825,000 2,485,000	\$ 31,155,000 34,062,000 18,519,000 33,522,000 40,582,000 39,511,000 31,771,000 31,7728,000 27,675,000 18,311,000 21,695,000	\$28,931,323 30,761,773 22,468,500 25,305,540 108,375,192 28,901,150 24,196,675 21,588,754 25,635,944 26,313,830 24,673,250 30,098,325	2,034,000 3,322,000 5,209,000 4,762,000 4,079,000 9,001,800 7,644,500 5,246,200 4,744,100 3,936,800 3,156,700 3,407,400	\$ 13,595,000 17,772,000 40,541,000 30,972,000 25,775,000 64,594,800 57,672,000 35,217,300 28,192,000 22,048,100 31,645,500	*\$54.022,531 49.014.450 16.265.292 25.982,876 34.431,553 25.392,245 28.918,050 17,970,298	2.245,200 3,114,000 4,000,100 5.094,500 6,610,500 6,015,600 5,067,900 5,469,000	\$13,346,20 20,721,50 29,079,70 38,480,20 39,709,70 40,753,40 42,015,80 42,124,00
rotals	\$289,890,510	44,432,000	\$272,530,000	\$308,676,589	57,473,000	\$363,338,000	\$397.270,256	58,799,900	\$423,203,700			

Advertised School Bond Sales.
Dodge Figures.



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The satin-smooth surface of Barreled Sunlight Gloss has no pores to hold dirt embedded. It washes like tile. And it is so durable that frequent washing will not injure its lustrous beauty

HUNDREDS of schools have found that Barreled Sunlight combines all the qualities most desirable for painting interior walls and woodwork. They are using this smooth, clean, lustrous finish to replace both ordinary paint and expensive enamel.

Three different finishes, all easily tinted, make Barreled Sunlight available for every interior painting job.

Where maximum light and sanitary cleanliness are essential—in lavatories and corridors—and on woodwork—Barreled Sunlight Gloss is the established favorite. Its light-reflecting surface is so smooth it washes like tile, and so durable that repeated washings will not wear it away. Comparable only to the most expensive enamel, it costs less and requires fewer coats.

For places where less than the full gloss is desired, Barreled Sunlight Semi-Gloss is widely approved. It has a still softer lustre than the Gloss and is as easily washed.

And for the duller effect sometimes preferred on walls of well-lighted rooms, Barreled Sunlight Flat meets every requirement. Extremely attractive, this finish is also washable—though naturally less durable under constant washing than the Gloss or Semi-Gloss.

Barreled Sunlight is so opaque, and so easy to apply with brush or spray, that it requires the minimum amount of labor to complete any given job. Sold in 55- and 30-gallon churn-equipped drums, and in cans from ½ pint to 5 gallons. Where more than one coat is required, use Barreled Sunlight Undercoat first.

There is a local distributor of Barreled Sunlight in all principal cities. Mail the coupon for further information and a sample panel painted with Barreled Sunlight.

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Distributors in all principal cities
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#### Easy to Tint Any Shade

Barreled Sunlight, an all-oil product, is easy to tint any desired shade by simply adding ordinary colors-in-oil. On the smaller jobs many painters are using the new Barreled Sunlight Tinting Colors, in handy tubes. In quantities of 5 gallons or over, Barreled Sunlight is tinted to order at the factory, without extra charge.



Barreled Sunlight

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Please send me descriptive literature and sample panel painted with Barreled Sunlight. I am interested in the finish checked here—

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The Sani-Onyx Raised Rim is scientifically rounded, so that all blows or jars received in the usual course of service, glance off without checking or chipping the sur-face in the manner so common to regular square-cornered tops.

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With a Sani-Onyx Raised Rim, liquids from overturned glasses cannot run on to the clothing of your customers or workers.

Sani-Onyx Raised Rim Tops are beautiful, permanent, non-absorb-ent, impervious to acids or chemicals. Will not stain. Easily and quickly cleaned with a cloth.

Sani-Onyx Raised Rim Tops com in white, black or black decorated

# Sani Metal

Porcelain Enamel Table Bases and Stools are sturdily made and heavily coated with enamel. Will not absorb dirt or grease. Will not rust, chip or crack. Easy to keep clean.

This is the equipment that is built to withstand the hard usage school children give to tables, counters and chairs. They can't chip, break or mar SANI Equipment.

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WHETHER you are installing a new cafeteria or revamping an old one, our engineering department can help you -without charge.

Use this service. Send us an outline drawing showing the dimensions of the room, location of doors and windows and columns, if any. State the number of persons you wish to serve at one time.

We will furnish a complete blueprint from which to make your installation-free of charge.

Send your diagram now and we will include our catalog showing the complete Sani Products line.

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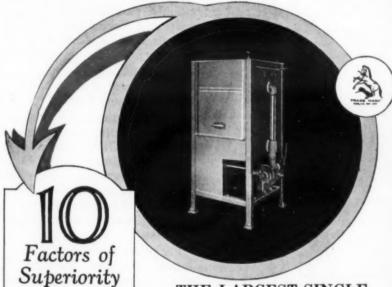
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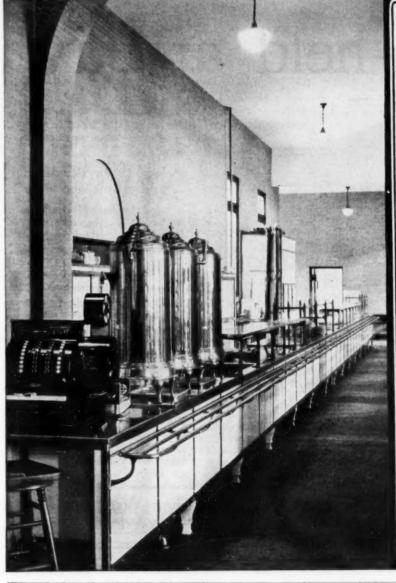
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Compact in size and surprisingly low-priced, Model S-1 COLT AUTOSAN fills a real need for efficient dishwashing in small hotels, restaurants and institutions. Ask your Kitchen Equipment Dealer about Model S-1 AUTOSAN or write us for interesting descriptive folder.

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Our Catalog will be sent promptly if you wish it. Ask for it without obligation.

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NEW ORLEANS

DETROIT

CHICAGO

#### MINNEAPOLIS SCHOOL NEWS

Fifty-five hundred teachers from all parts of the United States and foreign countries have filed their applications for teaching positions in the Minneapolis schools. Of this number, ap-proximately 125 were chosen to fill positions this year. This large number of candidates may this year. This large number of candidates may be due to the excellent reputation which the Minneapolis schools have gained throughout the country and to the fact that teachers know they will benefit through association with these schools, in spite of the fact that the salary schedule is lower than in many other of the larger sities. larger cities.

Minneapolis has discovered a new device for locating its new schools, namely the air plane. A complete set of air photographs is on file in the office of the business superintendent. Whenever the necessity of locating conjested districts and buying school sites arises, the situation may be seen at a glance by these air views

The opening of the Minneapolis schools showed an approximate enrollment of 75,000 pupils, the largest enrollment in the city's history. These pupils are housed in 105 school buildings, the addition of two new junior highs and the enlargement of several elementary schools reducing the number of part time pupils from 900 to 400. Despite the increased enrollment and the two new junior high schools, the teaching staff is increased by only seven teachers. This was made possible by the shifting of teachers within the system.

Several changes have been made in the high and junior high school principalships. Mr. C. W. Jarvis, assistant principal at Central high school, becomes principal of that school to succeed Mr. R. T. Hargreaves who leaves to accept a position as president of the State Teachers' College at Cheney, Washington. Mr. C. E. Blume, formerly at Madison elementary school, becomes principal at the new Wendell Phillips junior high school; and Mr. F. H. Forssell is transferred from the Seward school to the new Maria Sanford junior high school. to the new Maria Sanford junior high school. Miss Prudence B. Cutright, principal of the

William Penn, has been elected assistant director of research.

—In a salary survey now being made in Minneapolis, it has been found that the city ranks near the bottom of a list of those ranging in population from 300,000 to 600,000. Dr. Royal Meeker, economist and statistician, who directs the survey, is gathering data on the living costs of teachers. His survey will be an impartial one and will determine whether higher or lower salaries are justified.

Dr. Meeker believes that living costs of those in the teaching profession vary greatly from other professions because of the many inci-dentals involved. In his questionnaires, he stresses the miscellaneous items which form a

MISS KATE MARSH, Mt. Carmel, Ill.

Miss Marsh on June 8th last completed her fifty-eighth year as a teacher, and was reelected to the same position for another school year.

Miss Marsh taught thirteen wears in the schools of Gib-son County, Indiana, and then came to Mt. Carmel, Illi-nois, where she has taught continuously since that time. She served for some time as principal of the high school, but later returned to the classroom as an instructor.

large part of the living costs of teachers. When these questionnaires have been edited, tabu-lated, corrected, compiled, and compared with living costs and data from other cities, the results will be presented to the board of education. education.

—President Robert Lamb of the Berea, Ky., school board knocked Secretary W. G. Best on the head with a fruit jar, and rendered him unconscious. Lamb was arrested and put under a \$2,000 bond. The difficulty arose out of a division on the board with W. G. Best, Benton Fielder, and J. S. Wagers on one side, and Robert Lamb and B. P. Angel on the other. At the August meeting, it is alleged, Lamb ignored the rules which guide the meetings and tried to wrench the board's record book from the secretary, striking him on the head with a glass fruit jar. If found guilty of misconduct, Lamb's and Angel's offices may, according to law, be declared vacant by the board.

#### FIRE PREVENTION WEEK

FIRE PREVENTION WEEK

—Fire prevention week will be observed during the week of October 3rd to 9th. The National Fire Protection Association of Boston, Mass., has offered to send suitable material to school officials, and others interested in the subject, in order to insure a successful observance of the week. The material includes a revised edition of the fire prevention week handbook, posters, stickers, and popular pamphlets. The Association will also receive photographs of interesting features of the 1925 fire prevention week observance. week observance.

#### REMOVE OFFICES

Warren Holmes-Powers Company, architects, who have been specializing in institutional and school buildings, have changed their Lansing, Michigan, address to 112 E. Allegan Street. The firm has given considerable attention to developing the Holmes System of unit school-house planning. Mr. A. R. Shigley, formerly superintendent of schools at Allegan, Michigan, is directing the educational department of the firm.



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because they embody features not found in other fountains. They are the only PRACTI-CAL side-stream types. AU-TOMATIC STREAM CON-TROL takes care of pressure variation, so that the stream is always uniform in height. TWO-STREAM PROJEC-TOR means a safe, practical drinking mound that keeps the lips away from the source of supply. And children cannot playfully tamper with the stream! Every one a feature exclusively Halsey Taylor! We invite inquiries from interested school officials. Send for "The Truth About Drinking Fountains."

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THE HIGH SCHOOL PRINCIPAL AS SUPERVISOR

THE HIGH SCHOOL PRINCIPAL AS SUPERVISOR

Mr. Clifton S. Lowry, in the Kentucky High School Quarterly, discusses the high school principal, particularly the type and amount of supervision that is being done by principals of first-class high schools, and suggests improvements which appear to be feasible.

It is pointed out that to determine the amount of time spent by principals in supervision is simple, but to determine the type of such supervision is a much more difficult task. The latter phase of the subject demands a knowledge of the underlying principles of supervision, its nature, purpose and technique, together with a knowledge of the position of the principal, the duties and responsibilities of the office and the character of training required for the effective discharge of these duties.

As a basis for the study, the nature and purpose of supervision was discussed briefly, and the status of the high-school principalship, as revealed by the best educational literature and practice, was summarized. Using the brief summary as a basis or standard, facts concerning the high-school principalship in Kentucky and the supervisory activities engaged in by the principal were studied.

Notwithstanding the lack of standardization of the true functions of the high-school principal, it is coming to be recognized by boards of education, superintendents, and the principals themselves that there are certain definite relationships existing between the principal and the various officers of the school system. The superintendent being the chief executive of the school board is responsible to that board for the successful operation of the school system as a whole and of each individual unit. It is recognized in both government and industry that best results cannot be obtained where there are two executives of an enterprise having equal power. It is just as true with the school. Where there results cannot be obtained where there are two executives of an enterprise having equal power. It is just as true with the school. Where there It is just as true with the school. Where there is one board in control of a system of schools there must be one executive. The superintendent is the direct representative of the board and it is through him that the board operates. The principal is merely a representative of the super-intendent, through whom all official relations with the board should be held.

The principal, acting as the special lieutenant of the superintendent, is responsible to him for

the conduct of the high school, its administra-tion and instruction, all provided of course, he is given the proper material equipment, time, and authority to exercise his initiative. The amount of authority that is vested in the prin-cipal varies from system to system. The amount that should be is not, as yet, clear. An examination of the facts in a special study of high schools made by Davis, shows that the principalship in almost fifty per cent of the cases, is one of a non-professional character, and that he is merely the nominal head of his cases, is one of a non-professional character, and that he is merely the nominal head of his school, executing orders that come from above and exercising very little initiative on his part matters requiring professional training and

in matters requiring professional training and ability.

The functions of the high-school principal, according to Mr. Lowry, may be divided into three classes: (1) supervisory, or those that have to do with the improvement of classroom instruction; (2) organization, or the coordination of the work of the different departments, organizing courses of study and bringing the school in touch with the community; and (3) executive, or detailed office work which involves the keeping of records, answering the telephone, keeping up with the correspondence, and handing out supwith the correspondence, and handing out sup-

with the correspondence, and handing out supplies.

In actual practice, it is found that emphasis is placed sometimes on one of these classes of duties and sometimes on another, depending upon the particular principal's conception of the true functions of his office. In a study concerning the work of the principal, Gray found four sets of ideas of school principals as to functions almost totally divergent in character.

In a study made by Boggs, in 1920, of school board regulations concerning the elementary school principal, it was found that 77 different and distinct duties were prescribed for the principal. The study of thirty typical American cities selected at random, was made with special reference to the elementary school principal. It is equally applicable, however, to the high-school principal, since their problems are almost identical, those of administration, organization and supervision. In this study it was found that 77 different and distinct duties were prescribed by the various boards to the elementary school principals. Dr. Frank McMurry classified these under three separate heads: (1) Those that are purely clerical; (2) Those that con-

cern instruction more or less but require no special training on the part of the principal, and (3) Those that require the services of an educational specialist. He also shows the number of different requirements and the number of times each was required. It is clear that the duties of the principal as revealed by regulations of boards of education and by the actual tions of boards of education and by the actual practice of the principals themselves are, in order of their importance: (1) administration, (2) clerical work, and (3) supervision of teaching. Theoretically, according to the relative importance of the various functions of the principal, estimated by university professors and superintendents, supervision is the most important duty.

In a further chapter in this article, Mr. Lowry discusses the type and amount of supervision that is being done by the high-school principals of Kentucky. It must be admitted that any study of supervision that does not take into consideration the results, or the effectiveness thereof, is more or less superficial. It is hoped that the method of procedure used in supervision has become sufficiently standardized, that certain definite supervisory activities, taken together with the training of the supervisor and the amount of time that he devotes to supervision, may give a fairly accurate idea as to the effectiveness of such supervision.

Mr. Lowry shows that high-school principals

Mr. Lowry shows that high-school principals appear to be a group promoted from the position of teacher to that of principal, and that they have been trained for teaching, and not as administrators or supervisors of instruction. A study of the experience of principals shows that 92 principals have taught in the elementary schools for an average of approximately three 92 principals have taught in the elementary schools for an average of approximately three and one-half years. Twelve have had no experience as a teacher in the secondary schools, while 120 have taught for an average length of time of approximately six and one-half years. Twenty are serving for their first time as high school principal, while 106 have served in this capacity for an average of approximately five years.

Useful

Teacher: Hawkins, what is a synonym?
Hawkins: Please, sir, it's a word you use in place of another when you cannot spell the other one.—Boys' Life for July.



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# **Made for School Floors**

- Here is a brush your janitor will like to use.
   It is made to get the dust under school desks
   and in corners, without strewing additional material on the floor to be swept up.
- Kerosene or Arbitrin (an inexpensive cleaning fluid made in our own laboratories) rolls the dust into a sweeping compound — no dust to settle on desk tops and window ledges.
- Leaves the floor dry—preserves the wood—and eliminates mopping.
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School Boards and committees are invited to consult with our Engineers. There is no cost or obligation for this service.

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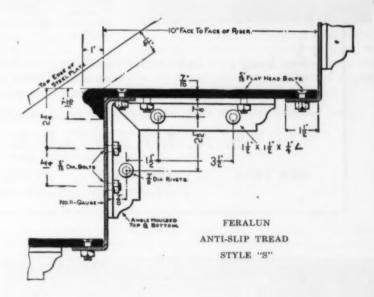
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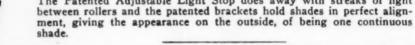
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It gives a correct and scientific diffusion of light and permits window ventilation.

It is easy to adjust and cannot get out of order-is strong and durable-good looking and well made. AIRANLITE Double Roll Shades can be made of any standard shade cloth or of canvas.

For school shades our special woven tan colored canvas is recommended.

The Patented Adjustable Light Stop does away with streaks of light between rollers and the patented brackets hold shades in perfect alignment, giving the appearance on the outside, of being one continuous shade.



For Long and Satisfactory Service Use AIRANLITE DOUBLE ROLL SHADES (Name is Copyrighted, U. S. Patent Office)

They Increase the Efficiency and Improve the Health of Teachers and Pupils.

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Modern Architects plan their buildings today in such a manner as to isolate those parts where noise is produced or quiet is necessary. Sound insulated floors and partitions are of little consequence unless Hamlinized Sound Proof Doors are added. They close tight on all jams and the floor as well as being filled with the highest grade sound insulating material. There are hundreds of installations all over the United States that prove the effectiveness of these doors.

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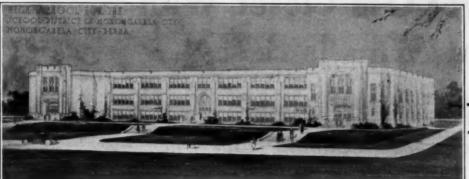
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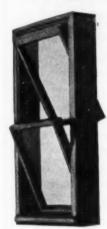
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HIGH SCHOOL



W. G. ECKLES, ARCHT.

# Outstanding Features of "Williams" Reversible Window Equipment.



Ideal Overhead Ventilation

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# Williams" Reversible Window Fixtures

"Williams" Plank Frame Reversible Window Fixtures are especially adapted to school house construction. The demand for a school house window that lends itself to good appearance, that is easily operated, that is reversible for cleaning and is conservative in cost, is satisfied by the "Williams" device.

Architecturally, the lines of the double hung window are retained and no special frame or sash construction is necessary. Cost is conservative-the elimination of weights, cords and pulleys, the substitution of a plank frame for a box frame, bring the cost to that of a good double hung window.

The building displayed is one of 35 school installations made by us for Architect Eckles.

"Williams" equipment is installed only by our trained mechanics. This assures our clients of efficient workmanship and proper operation of the equipment.

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#### THE WILLIAMS PIVOT SASH CO.

East 37th St. and Perkins Ave.

CLEVELAND, OHIO.

# SUPERVISORY WORK THE CHIEF FUNC-TION OF THE HIGH SCHOOL PRINCIPAL

(Concluded from Page 56)

In a city containing several high schools, the several principals under the direction of a high school superintendent or supervisor of principals -not of classroom instruction-should coordinate their efforts for constructive supervision of instruction by the principals and also effect a more scientific supervision of the curriculum. This supervision of principals is efficient largely to the extent of his successful experience as principal of a modern high school. He is not so likely to make a successful supervisor of the curriculum or of high school principals unless he has demonstrated marked proficiency as a principal. When high school principals thus constitute a supervisory committee under the direction of a highly skilled supervisor of principals—not classroom instruction—the problem of coordinating and testing the results of the high school teaching procedure is less difficult than when the visiting supervisor tackles it single handed without looking to the principal as the chief supervisor of instruction. Of course, in a small school system the principals, under the direction of one of their members or school superintendent, will do this work without the help of a special supervisor of principals and of curriculum. If, in every high school, there is one who is skilful as a pupil advisor and in tests and measurements, the principal is greatly aided in his efforts to focus attention on the pupil.

The outstanding need of the high school is the proper adjustment of the work of the princi-The high school will not function as it should until the effice of principal is so magnified as to be given largely, with the help of his expert teachers, to supervision of instruction. The high schools will not attract many leaders of large caliber until these leaders have an opportunity to function professionally and scientifically. The visiting supervisor of academic instruction fills a very important position during this period of adjustment of the functions of the principal. With the transfer of the supervision of instruction to the principals and the creating of the office of high school supervisor or superintendent in the large centers, the office of visiting supervisor of instruction automatically expires and that of visiting supervisor of principals and of curriculum looms large on the high school horizon. This supervisor is welcomed by the principals, because he comes as their friend and helper and gathers additional concrete data for making constructive suggestions to the principal supervisors. He never encroaches on the office of the principal in the capacity of supervisor of instruction, but offers much information as the principal needs to perform more skilfully as supervisor of instruction, and to make the best use of the curriculum provided for the school.

COATROOMS, WARDROBES AND LOCKERS

(Continued from Page 56) culation, then with doors having perforations near the top and near the bottom ample ventilation will be secured." There follows an account of a test for the chief engineer of the New York Equitable building installation where lockers with four different types of doors were tested out. The types with openings at the top and bottom proved satisfactory and better than where doors were perforated the entire height.

Another manufacturer states, "In reference to ventilating we do not encourage nor recommend highly any of the present systems of forced ventilation for lockers. We have never seen a system where all of the lockers in a section, or in a building, were given the same air force or suction. Our experience has been that the lockers near the main duct have a good draught of air, while those farther along the line receive little if any."

"In attempting to alleviate this condition locker manufacturers have placed damper plates over the perforations in the lockers which connect with the ventilators in order that the flow of air can be regulated, but this has not proven successful. The students are bound to tamper with these plates, and as soon as they are closed or partly closed, the students would open them because they were not familiar with the system and the reason for having the ventilation shut off in their lockers. Our choice of design for a source of ventilation would be of a type that permits the air to draw at the bottom of the locker instead of at the top. With such a system the doors are louvered at the top only and the perforations are placed in the locker backs near the bottom.

"So far as natural ventilation is concerned, we have found that the regular louvered type of door, having louvers at both top and bottom, is the most satisfactory. Tests have been made with lockers of various types of ventilating doors, such as wire mesh, expanded metal, round holes, fully louvered, and louvers at both top and bottom. It was found that the door with louvers both top and bottom offered the best ventilation.

—The construction of the \$400,000 Wildwood high school at Columbus, Georgia, just completed, was under the supervision of Architects Hickman and Marton of Columbus. The designing architects were Starrett and Van Vleck of New York.

-Impressive ceremonies attended the cornerattended the cornerstone laying of the new Woodrow Wilson high school at Terre Haute, Indiana. The principal address was delivered by Superintendent J. O. Engleman. President Wm. F. Mendenhall of the school board presided.

# The **NORTON** Closer With Hold Open Arms Is Best Suited For Schoolhouse Work

Every Schoolroom Should Have One

1st The doors are closed with a uniform speed, which gives the pupils a chance to go through a door without getting caught or injured.

**2nd.** Having two speeds, the speed at the latch can be set for absolute quiet—no latch necessary.

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Jones Monday and notes that she is giving a

written lesson that day he saves himself and

Miss Jones the embarrassment of discovering

A USABLE LESSON PLAN CARD Evan E. Evans, Winfield, Kansas Several years ago the writer was in the office

Several years ago the writer was in the office of a superintendent of schools on a Monday morning when the runners from various grade buildings came with a bunch of plan sheets about twenty by twenty-four inches in size. These sheets had a large space for each class recitation period during the week and in each space was the definite assignment for each recitation. The superintendent gathered the charts together, rolled and tied them and tossed them into the closet upon a shelf. He had not the time to study them, and the work was dead work by the instructors and for disciplinary purposes only.

Working with that incident in mind and considering the problems of coordination, supervision, and a stronger departmentalization, the following plan was devised to eliminate dead work and at the same time stimulate instructors to make careful plans, recognize the modern trend in education, and afford the high school principal a useful device with which to work.

The following weekly plan card was worked out:

It is five by eight inches in size and gives one space for each hour in the high school day.

The lesson plan is to be given for the entire week. In case a project is under way which will run through the entire week the fact is noted in a brief sentence. In case a new project is to be started in the middle of the week, depending upon the successful conclusion of the project under way the space will probably carry a double entry as follows:

entry as follows:
Completion of (name Introduction of (the of project) followed by next project).

a quiz Tuesday or Wednesday.

The plan cards are turned in to the heads of the departments each Friday noon, bearing the lesson plans for the following week. The head of the department checks through to see that all plan cards are filed and that the work is progressing within the time limit. They are then left in the principal's office Friday night.

The principal can go through the cards for a faculty of fifty teachers in thirty minutes and have a good general picture of the work plan for each instructor and each department for the following week. In planning his supervision he can plan to be with Miss Smith when she is introducing a new unit since she has a certain technique which it would be well to carry to other teachers. If he plans to visit Miss

the fact after the visit has started. In case he wishes to visit in the mathematics department he can check through and know what will be offered in each section each week. His work can be planned much more satisfactorily. Too, he need never sit through the first part of a class wondering what it is all about when he should be giving his attention to other matters. Also it eliminates the stock question, "Well, what are you doing in your department today?" The accompanying illustration shows a type card turned in at the Winfield Junior-Senior High School where the plan is being used. The instructors are happy to co-operate in a plan like this for they know it is being used, that it is not dead work, and probably gives them as much assistance as it gives the super-The cards are filed and after several weeks

it is a simple matter to run through all the cards of an instructor and note the continuity and watch the general yearly plan develop.

—When the election returns at Sapulpa,

—When the election returns at Sapulpa, Oklahoma, were closed, it developed that N. S. Kutch had 169 votes and O. W. Bray 110, and J. T. Cannon 45. Then the result was contested and 166 witnesses testified that they had voted for Bray. Other proof was submitted to show that Bray had been deliberately counted out. The court ordered that Bray be given a seat in the school board.

—An injunction suit was brought against the

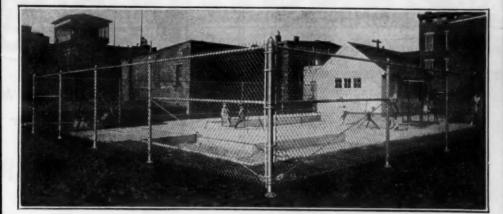
the school board.
—An injunction suit was brought against the Spring township school board, near Bellefonte, Pa., contesting the right of that body to erect a new school building on a site which had been selected. "A first class murder trial would not have drawn a larger crowd to the courthouse," said the Bellefonte Democrat. The judge held that the school board was entirely in its rights to select a school site. The site in question was also approved by the state board of education.

	Resident Res
2	
8	
_	
5	
_	Lenson Plans
lease 1	Christine Wells 7th graic Geography Rom 128 Relation of winds, rain, and poean currents the entire week.
,	Christine Sells 7th grade Geography Rome 128 Relation of winds, rain, and poean currents the entire week.
,	Christine Wells 7th grade Geography R-= 128
2	Christine Sells 7th grade Geography Rome 128 Relation of winds, rain, and poean currents the entire week.
2	Christine Sells 7th grade Geography Ross 128 Relation of winds, rain, and poean currents the entire week. Relation of win's and rain
2 1	Christine Bells 7th grade Geography R. 128 Relation of winds, rain, and poean currents the entire week. Relation of winds and rain Relation of winds and rain

(ABOVE) PLAIN LESSON CARD. SIZE 5" x 8". (BELOW) CARD WITH A COMPLETE PLAN.

#### SCHOOL











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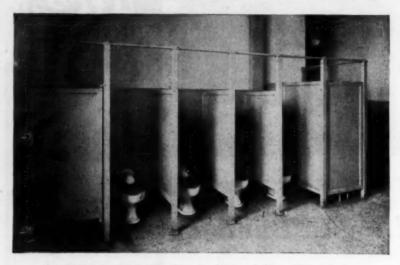
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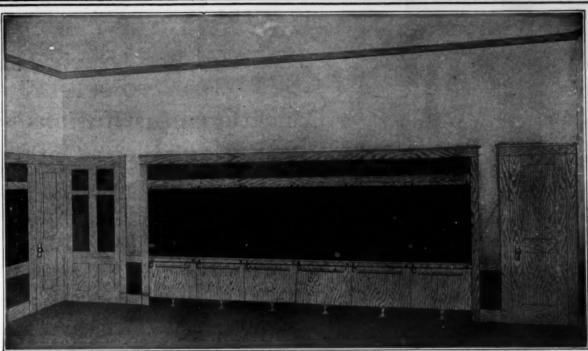
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SUPERVISED STUDY; HAS IT A VALUE?
(Concluded from Page 48)

medians were translated into "chances" and according to the mathematical calculations it was found that in 5,319 cases out of 10,000 the group which had had supervised study in high school would actually excel in grade making in the university. Reducing the number to smaller terms, in 53 cases out of 100 the supervised study group would succeed better.

In the light of the facts revealed, then, we are justified in saying that only a comparatively small advantage lies with this particular supervised study group. Whether the advantage is significant enough to cause the introduction of the newer plan, the writer is not prepared to say. One is safe in assuming, however, that generally speaking, the better students of a high school group are the ones who attend college. About the only thing that almost all experimenters in the field of supervised study seem to agree upon, is the fact noted above, that supervised study helps the poor student decidedly more than it does the good one. Since a positive though small help for the better group is found, the group which is supposed to receive the least benefit, it would seem only right to assert that supervised study does show a rather decided total advantage over the traditional type of recitation and study.

TWO RECENT DESIGNS FOR NEW YORK ELEMENTARY SCHOOLS
(Concluded from Page 61)

over the main entrance are outstanding features of the design.

The buildings are of fireproof construction, with steel frames, brick walls backed with hollow tile, concrete floor arches, and hollow tile partitions. The floors of corridors, stairways, play rooms, auditorium and toilets are of cement, while those in the classrooms, gymnasia and offices are of wood; tile, or enameled brick

wainscoting is used in the toilets, and saltglazed brick in the playrooms and gymnasia.

The buildings were erected at a cost, per pupil, of \$360, and a cost, per cubic foot, of 39.12 cents; the cubic foot cost of the mechanical equipment and furniture was 12.29 cents. The entire building contains a total of 1,736,046 cubic feet of space.

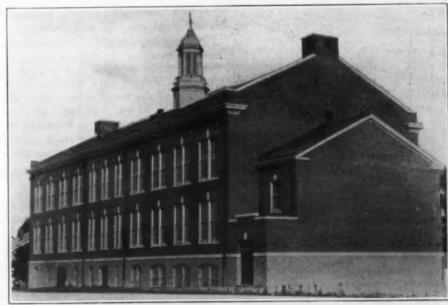
The buildings were designed and erected under the direction of Mr. William H. Gompert, architect and superintendent of school buildings for the New York City board of education.

THE GEORGE WASHINGTON HIGH SCHOOL, NEW YORK CITY
(See Page 62)
The George Washington High School in New

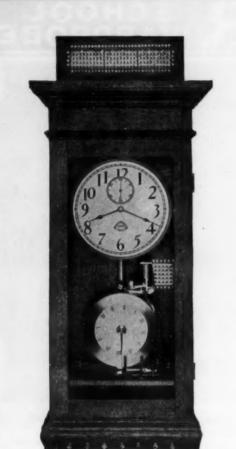
York City, the largest and most expensive high

school in the metropolis, is built on historic ground, in the Fort George Hill section made famous in revolutionary times. It is located on Amsterdam Avenue, in Manhattan, and at the summit of Washington Heights. Its commanding site, overlooking the Palisades of the Hudson, the Harlem River bridge, and the colonnade of the hall of fame across the river, gives it an approach that few school buildings possess. The approach to the building gives a fine view of its appearance, with its winding sweep of payement.

The plans for the building were begun in 1921 during the incumbency of Mr. C. B. J. Snyder, formerly superintendent of school buildings, and were later carried out by his successor, Mr. Wil-



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The Best Costs No More

### The Landis Engineering & Mfg. Co.

WAYNESBORO, PENNA.

liam H. Gompert, the present architect of the board of education.

The structure has a frontage of 376 feet on Audubon Avenue and rises to a height of four stories, topped by a tower and lookout lantern. It is an adaptation of a new standard type of high school to meet conditions in the varying level of the site. The building is designed in the Colonial style of architecture, with red brick and stucco, patterned after Independence Hall in Philadelphia. The main features of the building are a detailed classic portico, with six Ionic columns, a balustrade with six classic urns and eagles, and an octagonal tower with lookout lantern. A portico leads through bronze doors into a marble hall. From this a double spiral stairway of graceful design takes one to the second floor.

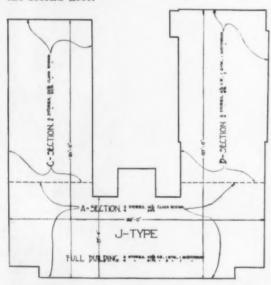


DIAGRAM OF THE J-TYPE OF ELEMENTARY SCHOOL SHOWING METHOD OF DIVIDING THE BUILDING INTO SECTIONS.

Opposite the entrance is the auditorium with seats for 1,500 persons and a large stage. The principal's office is also on this floor, a library, two gymnasia, two swimming pools, and dressing rooms, and a concert room seating 150 persons. The library is a large, well-lighted room, furnished with study tables and space for books. The classrooms begin on this floor and fill the floors above. There are also three laboratories, six art study rooms, a small theater for dramatic work, a workshop, domestic science rooms, supply rooms, a bank, a printing room, offices, and a cafeteria accommodating 1,000 pupils at a time. Above the cafeteria is a teachers' lunchroom.

On the north end of the site sufficient space has been reserved for an athletic field. This field will eventually have a stadium to harmonize architecturally with the school itself.

The building was planned in September, 1921, and was occupied in February, 1925. It accommodates 3,750 students and was erected at a cost of \$3,500,000. Mr. William H. Gompert, architect of the board of education, supervised the erection of the building. Mr. Arthur A. Boylan, the principal, was especially interested in the new school and materially assisted in the working out of the educational details.

### SOUTH JUNIOR HIGH SCHOOL, WALTHAM, MASS.

(See Page 63)

This building is a decided departure in arrangement from the usual junior high school building. Architecturally, the main feature is the front wing, containing the assembly hall and the public library branch which have been provided to meet general community needs, and only in a secondary degree school needs.

The building contains twenty classroom units, a public library branch, an auditorium seating

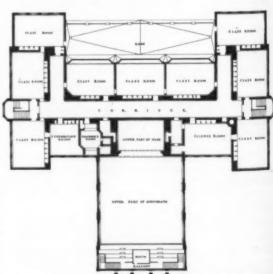
750, and a large gymnasium. The latter measures 50 by 100 feet, exclusive of bleachers, and can be divided through the middle for simultaneous use by boys and girls. The permanent bleachers have a seating space for 200, and windows from the main corridor permit of additional seating space at each end of the room. There is an apparatus room, a room for the instructor, and locker and shower rooms. The entire facilities of the gymnasium have been planned for community as well as for school use.

The building has 700 home stations for pupils on the first and second floors.

The cost was \$264,910 or \$378 per pupil.

The exterior of the building is of variegated red brick and natural lime stone trim.

The architects are Messrs. Kilham, Hopkins & Greeley, Boston, Mass.



SECOND FLOOR PLAN, SENIOR-JUNIOR HIGH SCHOOL, WALTHAM, MASS.

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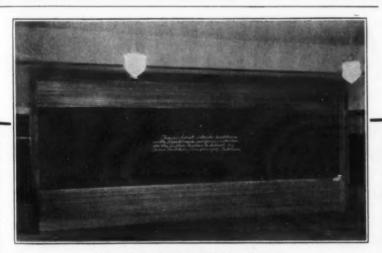
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This method of DAYLIGHT OPAQUE PRO-JECTION places at the teacher's disposal an in-exhaustible supply of picture facts up-to-date at

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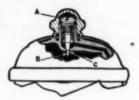


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-the roll rim sink is cast iron, porcelain enameled.

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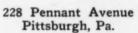
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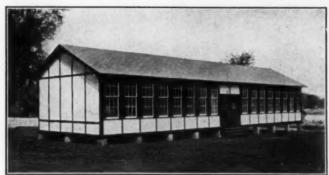
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We'd be delighted to furnish an estimate covering your needs and tell you of the many school boards we are serving.

#### ASBESTOS BUILDINGS COMPANY

2013 Market Street Philadelphia, Pa.





#### KNOW THE LAW

(Concluded from Page 67)

facts have caused the board to pay the teacher an unannounced visit for the purpose of informing her that she has been giving the children too much play and dismissing at too early an hour in the afternoon. She may be advised that inasmuch as they are paying her a very fair salary they expect her to render in return a fair day's work. It would seem that their idea of a fair day's work had more to do with the number of hours employed rather than the quality of the work done. In some instances even in the larger schools the teacher has been subjected to unfair criticism for trying to follow the legal requirements of her profession.

Many examples similar to the above might be cited to illustrate this point. But it is hardly

It was said a good many years ago: "Know the truth, and the truth shall make you free." I have never doubted the philosophy embodied in this old saw. And I am wondering if it is not applicable to the situation we have tried to discuss. I am firmly convinced that if the member of the school board would know the truth regarding the school law of his state, it would free him of a good many blunders committed in his official capacity, which in some instances entail a loss to the district or an injustice to a teacher or school official who tries to do business only in a legal manner.

#### A FILING SYSTEM FOR THE HIGH SCHOOL

(Continued from Page 50)
3. J. Departments of high school. See File 8.
K. Milk Class. See 8-C.
L. Prospectus. See 5-I.
M. Lists of Failures. See 6-J.
N. Instruction, General, See 8-I.
O. Calendars.

2-N, Instruction, General, See 8-1.
2-O, Calendars.
2-P, Information about Neodesha High School.
2-Q, Reception (open house).
3. ACTIVITIES, STUDENT, LOCAL
3-A, Contests. See 3-E, also 8-F, also 3-C.
3-B, Debate. Also see 4-D.
3-C, Declamation and Dramatics. Also see 18-D,

also 18-E, also 4-C, file for (Previous to Sept. 8, 1924, in Transfer "B").

3-D, Honors and Awards. See 8-E.

3-E, Music Contests, Local. See also 4-E and 18-D.

3-F, Organizations. See File 9.

3-G, Reports of Student Activities, Financial.

3-H, Reports of Student Activities, General.

3-J, Transcontinental Race (in Transfer "B").

3-J, Music.

3-K, Ushers. See 6-K.

3-L, Annual. See 6-F.

ACTIVITIES, STUDENT, INTER-SCHOOL.

4-A, Athletics. See File 1-A, B, C, G, etc.

4-B, Contests. Also see 3-B, 4-D, 4-E, and 8-F.

4-C, Declamation Contests. See also 3-C.

4-D, District Debate. (Three files in Transfer

"C").
4-E, Music Contests (Previous to Sept. 8, 1924.
in File 4-E, Transfer "C").

4-E, Music Contests (Previous to Sept. 8, 1924. in File 4-E, Transfer "C").

5. ADMINISTRATION

5-A, Administration, General.
5-B, Announcements. See 2-A and 2-B.
5-C, Applications and Recommendations.
5-D, Attendance. See 6-G, also 19-C, and 5-O.
5-E, Credits, Transcripts, etc.
5-F, Courses of Study.
5-G, Discipline, before Sept. 8, 1924.
5-H, Discipline, before Sept. 8, 1924.
5-H, Discipline, before Sept. 8, 1924.
5-H, Discipline, after Sept. 8, 1924.
5-J, Principal, Superintendents, etc. See File 11.
5-K, Superintendent. See 11-C.
5-L, Test Reports.
5-M, Transcripts. See 5-E.
5-O, Truancy and Irregular Attendance.
5-P, Recommendations. See 5-C.
5-Q, Office. See 12-D.
5-R, List of Failures. See 6-L.
5-S, Requisitions (before Sept. 8, 1924, see 11-B).
(After Sept. 8, 1924, see 11-C.)
5-T, Teachers' Reports on Students. (Special Reports.)
5-U, Students' Records, Correspondence with Parents.
5-V, Instruction, General. See 8-M.
5-W, Schedule of Classes, etc. See 2-L
5-X, Lists of Class Members.
5-Y, Awards,
5-Z, Information about Neodesha High School. See 2-P.
6. STUDENTS, Material pertaining especially to: 6-A, Applications. See 5-C.

See 2-P.

6. STUDENTS, Material pertaining especially to:
6-A. Applications. See 5-C.
6-B. Credits, Transcripts, etc. See 5-E.
6-C. Discipline of Students. See 5-G and 5-H.
6-D. Health. See File 7.
6-E. Student Honors and Awards.
6-F. Publications.
6-G. Reports of Attendance of Students living outside district.
6-H. Transcripts. Credits, etc. See 5-E.
6-I. Truancy. See 5-O.
6-J. List of Failures (previous to Sept. 8, 1924, in Transfer "C").
6-K. Ushers.
6-L. Teachers' Reports on Students' Work, etc. See 5-T.
6-M. Agreements Made by Students. See 5-G.

6-M, Agreements Made by Students. See 5-G

and 5-H.
6-N, Records, Students. (See 5-T for Teachers' Reports and 5-U for Correspondence with Parents.)
6-O, Instruction, General. See 8-M.
6-P, Lists of Class Members. See 5-X.
6-Q, Awards. See 6-E.
6-R, Reports on Student Activities. See 3-G and 3-H.

7. HEALTH. 7-A, Doctors' Permits. 7-B, Health, General. 7-C, Milk Class.

7-C, Milk Class.

DEPARTMENTS OF HIGH SCHOOL
8-A, Debates. See 3-B, also 4-D.
8-B, Declamation and Dramatics. See 3-C, 4-C, 18-D, and 18-E.
8-D, Music. Also see 8-E, 3-E, 4-E, and 3-J.
8-E, Music Credits. See 5-E.
8-F, Commercial Department.
8-G, Textbooks.
8-H, Office. See 12-D.
8-I, Library.
8-K, Science.
8-L, List of Class Members. See 5-X.
8-M, Instruction, General.
8-N, Information about N. H. S. See 2-P.
8-O, English Department.
8-P, Social Science Department.
8-P, Social Science Department.
8-P, Home Rooms.

9. ORGANIZATIONS of Neodesha High School.

ORGANIZATIONS of Neodesha High School.
9-A, Alumni.
9-B, Boy Scouts.
9-C, Junior Class, 1924. (In Transfer "D."
9-D, Senior Class, 1922. (In Transfer "D."
9-E, Senior Class, 1923. (In Transfer "D."
9-F, Senior Class, 1924. (In Transfer "D."
9-F, Senior Class, 1924.
9-H, Clubs, Boys'.
9-I, Clubs, Boys'.
9-I, Clubs, Girls'.
9-J, List of Classes. See 5-X.
9-K, Sponsors.
9-L. Y. W. See 9-I.
9-M, Ushers. See 6-K.
9-N, Outside Organizations. See File 13.
9-O, Junior Class, 1925; Senior Class, 1926.

9-0, Junior Class, 1925; Senior Class, 1926.

10. FACULTY

10-A, Applications. See 5-C.
10-B, Association, Teachers'.
10-C. Directories, Teachers'.
10-D, Lists of Teachers.
10-E. Notices and Memo's to Teachers.
10-F, Sponsors. See 9-K.
10-G, Requisitions. (See 11-B for before Sept. 8, 1924, in Transfer "D." See 11-C for after Sept. 8, 1924.)

10-H, Teachers' Reports on Students. See 5-T.
10-I, Magnaines and Bulletins and Publications for Teachers.
10-J, Teachers, General.
10-K, Instruction, General. See 8-M.

10.-K, Instruction, General. See 8.-M.

HIGHER OFFICIALS

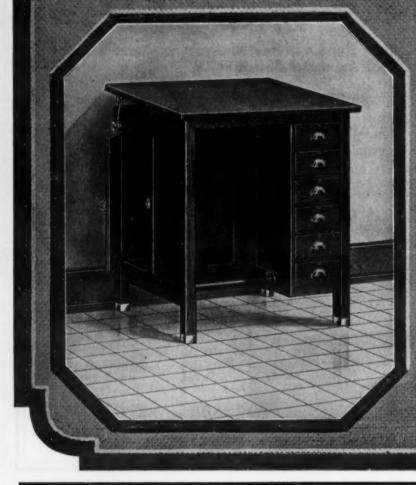
11.-A, The High School Principal.

11.-B, Superintendent Liston. (In Transfer "D.")

11.-C, Superintendent DeLay.

11.-D, Board of Education.

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  12-C, New School Building.
  12-D, High School Office.

- 12-D, High School Office.

  OUTSIDE ORGANIZATIONS

  13-A, Council of Administration.

  13-B, Debating League, Kansas High School.
  See 4-D.

  13-C, North Central Association.

  13-D, K, S, H, S, Athletic Association.

  OTHER HIGH SCHOOLS

  14-A, Other High Schools.

  14-B, Junior High Schools.

  14-C, Information regarding N, H, S, See 2-P.

  COMMUNITY

- 14-C, Information regarding N. H. S. See 2-P.

  15. COMMUNITY

  15-A, Lyceum. All correspondence previous to September, 1924 (in Transfer "E").

  15-B, Lyceum. Other than correspondence previous to September, 1924 (in Transfer "E").

  15-C, Lyceum, 1924-25.

  15-D, Rotary Club. Bulletins previous to September, 1924 (in Transfer "E").

  15-E, Music furnished Community. See 3-J.

  15-F, Ushers. See 6-L.

  15-G, Lyceum Advertising. See 15-B.

  15-H, Community, General.

  15-I, Neodesha Daily Sun.

  15-J, Lyceum, 1925-26.

- 16. UNIVERSITIES

  16. A, Baker University.

  16. B, Marietta College.

  16. C, University of Chicago.

  16. D, Universities and Colleges, General.

#### 17. PERSONAL

- ERSUNAL
  17-A, Correspondence, Personal.
  17-B, University of Chicago Notes (in Transfer "E").
  17-C, Thesis.
  17-D, Unpublished Documents.

#### 18. UNCLASSIFIED

- NCLASSIFIED

  18-A, China.

  18-B, Clippings.

  18-C, Mdse.

  18-D, Program Samples.

  18-E, Short Selections.

  18-F, Stocks and Bonds.

  18-G, Ushers. See 6-K.

- 18-G, Ushers. See 6-K.
  REPORTS
  19-A, North Central Association. See 13-C.
  19-B, State Reports.
  19-C, Monthly and Yearly Attendance Reports.
  19-D, Teachers' Reports on Students. See 5-T.
  19-E, Disciplinary Reports. See 5-H and 5-G.
  19-F, Reports of Attendance of Students outside District. See 6-G.
  19-G, Mill Account Reports. See 7-C.
  19-H, Reports of Student Activities, Financial. See 3-G.
  19-I, Reports of Student Activities, General.

  - Reports of Student Activities, General. See 3-H. 19-I,

19-J, Reports, General. 19-K, Information regarding N. H. S. See 2-P.

# 20. PARENTS 20-A, Correspondence with Parents concerning: 1. Truancy. See 5-C. 2. Discipline. See 5-H and 5-G. 3. Student Records. See 5-U and 5-T. 4. Complaints of Parents. See 20-B. 5. Complaints of Senior Parents. See 20-B. 20-B, Special Letters to and from Parents.

#### A STUDY OF CHICAGO SCHOOL FINANCES

(Continued from Page 70) merly a college degree was not required even for a Chicago principalship. To be eligible for a Chicago principalship today, one must have a college degree, plus four years of successful teaching experience, and must have passed a two-day written examination in seven subjects and an oral examination.

There has been a rise in school building standards, e.g., fireproofing. It means extra cost. Then, too, during the war there was almost complete stoppage of building operations which must be caught up with now. On January 1, 1923, it was estimated that 10,000,000 of America's school children had inadequate housing: there was a shortage of 250,000 classrooms requiring \$3,000,000,000 to build. On September 1, 1924, there was a shortage of 1,108 classrooms and 80,000 seats in Chicago.

7. Finally, much of the increased cost is fictitious-it represents inflated money. For example, it takes \$177 to buy as many pencils, tablets, geographies, desks, blackboards, and the like now, as \$100 would buy in 1914 in Chicago. The Chicago dollar is worth about 57 cents as compared with its purchasing power in 1914.

#### A Huge Floating Debt

Since 1914 the annual school expenditures in Chicago have been exceeding the annual rev-The margin between revenue and expenditure is gradually widening and will continue to widen unless a remedy is found in a larger school tax yield. Mr. Rogers discusses

this phase of Chicago's school finance problem as follows

"A careful estimate for the next three years to the end of 1928—shows that on the basis of present revenues in sight and on the basis of the present educational program of expenditures, there will be an annual deficit averaging \$4,700,000. The school board is obliged to borrow money to run the schools this year on the strength of taxes to be collected next year. The banks loan the money at 5 per cent interest and are given tax anticipation warrants as their security. (Interest charges for 1924 cost the school board \$925,211.14-practically the equivalent of the cost of two new elementary school buildings per year.) The state law prohibits issuance of tax anticipation warrants for an amount greater than 75 per cent of the next year's expected tax collections. The school board is now borrowing dangerously near the 75 per cent limit, and cannot finance the schools through 1927 without exceeding that limit. The end is in sight.

A peculiarity develops here in that statistics show that Chicago's school enrollment has grown during the past decade four times as fast as has its general population. With a population in 1914 of 2,437,526 Chicago had a school enrollment of 273,719. Ten years later in the year 1924, Chicago with a population of 2,-942,605 showed a school enrollment of 405,213. In brief, during this period the population increased 12 per cent while the school enrollment increased 48 per cent.

(Concluded on Page 151)

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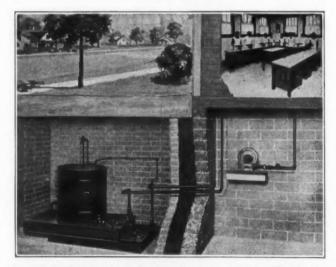
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(Concluded from Page 148)

#### The Risk of Reducing Expenditures

"Expenditures can be reduced, but the sacrifice would be too great," says Mr. Rogers. "The schools cannot survive on present revenues unless the following drastic alternatives are taken:

"1. Abandon the high schools and give only grade school education.

"2. Abandon kindergartens, evening schools, community centers, continuation schools, manual training and domestic science courses, and other projects allied to the regular school work.

"3. Reduce teachers' salaries markedly.

"4. Shorten the school year to less than ten months.

"5. Other radical retrenchments."

The conclusion which the expert reaches here is that inasmuch as the school board has pared expenditures to the bone, all resort to the above expedients is unthinkable.

The total national wealth was estimated in 1922 at \$320,803,862,000. The average yearly income is \$65,000,000, while the cost for the public elementary and secondary schools in 1922 was \$1,580,671,296. The conclusion here is that the country as a whole is well able from the standpoint of wealth to maintain its educational system upon a high plane of efficiency.

In dealing with the city of Chicago as a separate entity, it develops that while the per capita expenditures of the fifteen leading cities ranges from \$12.37 to \$17.83, Chicago is the lowest in the list. Five cities only, namely, Washington, D. C., Philadelphia, Pa., San Francisco, Calif., New Orleans, La., and Baltimore, Md., show a lower per capita cost. Comparing Chicago with fifteen other tax units in the state on a school tax levy based on \$100 assessed valuation, it is found that the highest is \$6.75, the lowest \$2.75, and Chicago \$3.03.

In other words, twelve cities in the state outside of Chicago pay a higher rate.

#### Remedy Sought in Tax Revision

Two methods are suggested for securing an increased school revenue, namely (1) increase in tax levy and (2) increase in property assessments.

"Under Section 189 of the School Law of Illinois, the board of education of the city of Chicago may cause the proposition to be submitted to the voters whether the educational fund tax levy rate shall be increased from \$1.92 per \$100 of assessed valuation to as high as \$2.92, subject to a majority vote.

"Holding a referendum to increase the levy rate in the education fund is a direct and reasonable procedure. The legislature intended that this method should be used and set up the machinery. Furthermore until Chicago has used this method, the Chicago schools can look for no legislative revenue relief from the state In the 54th General Assembly, legislature. Senate Bill No. 399 provided that unit system school districts might levy a tax for support of high schools in addition to the levy for elementary schools. This bill was passed for downstate cities, but Chicago was removed from its provisions on the ground that Chicago had not yet availed itself of means already at its command, namely, the referendum to permit the increased rate from \$1.92 to \$2.92.

"After studying the question of revenue relief for months, weighing all possible methods, the school board, on January 13 adopted a resolution calling on the city council to place the referendum proposition on the ballot. Seven members of the school board appeared before the schools committee of the city council and urged the matter. They told the aldermen present that the referendum offered the best plan. They asked the aldermen to let the people decide whether they wanted the tax rate to be increased. By a 7 to 2 vote, the aldermen refused to let the matter go on the ballot.

"The second plan for raising the \$17,000,000 revenue needed by the school board is through an increase in property assessments while maintaining the same tax levy rates. This is the plan advocated by the aldermen. The city council has appropriated \$46,000 to expend in pushing this plan. Though thwarted in its own plan, the school board has co-operated in the other plan, and has appropriated \$25,000 to assist.

Chicago Public Schools Have Seating Surplus
President E. B. Ellicott of the Chicago board
of education, in a recent statement, declares
that the public schools formerly pictured as
floundering in the meshes of a large seating
shortage, actually have a 13,000 surplus of seats
and that the lack of seats is due to the inability of educators to keep the schools filled to
capacity at all times.

The statement was prepared by Mr. Nelson
B. Henry, secretary of the finance committee of
the board, who went into the records and found
figures giving the actual number of seats in the
elementary and high schools.

In bringing the record up to date, it was

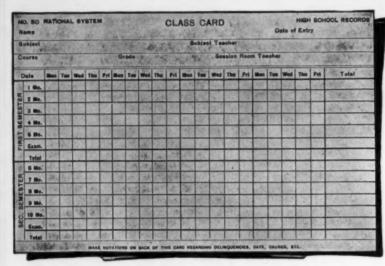
elementary and high schools. In bringing the record up to date, it was found there are 345,936 elementary seats and 77,862 high school seats, a total of 423,798, as compared to an estimated elementary membership of 338,000 and a high school membership of 72,000. Thus, the elementary surplus of seats is 7,936 and the high school surplus 5,862, totaling 13,798.

Considering the schools and additions to be

Considering the schools and additions to be opened this year, the statement shows that there will be a total of 355,900 elementary seats, 83,700 high school seats, the membership estimated at 339,000 and 75,000 respectively, bringing the total surplus of seats to 25,600 by next

#### Wrapped Up In Itself

Teacher: Who can tell me what a cow's skin is used for?
Sammy: I kin, teacher! It's used to keep the cow's meat in.—September Boys' Life.



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PUBLICATIONS RECEIVED

The Use of the Voice and the Art of Questioning Issued by the board of education, New York, N. Y.

The booklet is a composite of addresses made by district superintendents at conferences held with the supervisors and teachers in their re-spective districts. The first discusses the use of the voice and means for improvement. The second outlines the principles governing good classroom questioning, the requisites of a good question, and points out the errors to be avoided in questioning.

Inspected Fire Protection Appliances
Issued by the National Board of Fire Underwriters, Chicago, Ill.
The booklet is an alphabetical list of names of manufacturers of fire protection appliances. The appliances have been inspected as to their fire hazards and have the approval of the fire underwriters

Inspected Gas, Oil, and Miscellaneous Appliances
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Word Recognition Test Form I. Primary Primary Word Recognition Test Form I. Price, \$1.50 per one hundred. Research Service Co., Los Angeles, Calif. A group test in word recognition for primary children. It is diagnostic and encourages ability to recognize printed words from visual stimuli and from auditory

Sentence Vocabulary Test: Forms I and II. Caroline Armstrong and Cora L. Danielson. Price, \$1.50 ea. Research Service Co., Los Angeles, Calif. This is a standard test designed to measure pupils' ability to recognize word meaning. It is in two equivalent forms and the tests are put up in packages of one hundred.

Effect of the Junior High School Upon College Entrance Requirements. Arthur J. Klein, chief of the division of higher education. The pamphlet represents the results of a study to learn the willingness of the colleges and universities to adjust their entrance requirements to permit graduates of the junior and senior high schools to enter college on the basis of the senior high school course. Twenty-two replies indicate a favorable attitude; seventeen emphasize doubt or reluctance without stating specific reasons; 21 express the desire to continue the present

plan of accepting the certification of the principal for work done; twelve institutions express a desire that the junior high school be standardized to insure satisfactory work prior to the three-year senior high school; in 25 cases favor of the plan appears to be conditional upon the assurance that the twelve units of senior high school work cover definite prescriptions in English, foreign language, mathematics, and science.

lish, foreign language, mathematics, and science.

Statistics of City School Systems for 19231924. Bulletin No. 41, 1925, issued by the Bureau of Education, Washington, D. C. Price, 25
cents. The report presents the statistics of
schools for the school year 1923-1924. In the
report, the cities are grouped according to population groups and the tables describe these
groups with respect to size. In groups I, II, and
III, 773 cities report 23,225 schools and 14,922
buildings. Among the topics taken up in the
report are property valuation; expenditures, and
number of schools and school buildings; personnel and number of day schools and school
buildings; receipts of city school systems; expenses and outlays of city school systems; expenses of instruction; expenses of operation and penses of instruction; expenses of operation and maintenance of school plant, and bonds and tax-

maintenance of school plant, and bonds and tax-ation in city school systems. Salaries of Teachers in the Day Schools of Massachusetts. Bulletin No. 5, Series No. 170, 1926, issued by the Massachusetts Department of Education at Boston. The bulletin gives in compact form the information relating to teach-ers' salaries that is of most significance to school officials. Supplementary information is also officials. Supplementary information is also given, including a comparison of the average salaries for the state and the several groups of cities and towns in 1915-16, 1920, 1921, and

Community School Plans. Bulletin No. 3, 1926, issued by the Julius Rosenwald Fund, Nashville, Tenn. This is a revised edition of a pamphlet previously issued containing plans and specifications for schoolhouses and grounds. The state education department offers to send blue prints of any of the plans shown, together with specifications and bills of material, after the community has selected the plan to be used.

Eleventh Annual Report of the National Comfor the Prevention of Blindness, December, 1925. Issued by the National Committee at 370 Seventh Ave., New York, N. Y. The eleventh conference of the National Committee held in November, in the Russell Sage Foundation Building, marks the breadth and scope to which the movement for the prevention of blindness has grown. The report shows that the membership has increased from 10,000 to more than 16,000 men and women during the

The committee, through its investigations, learned that it is not only possible to prevent actual blindness, but to prevent the development actual blindness, but to prevent the development of eye defects, which may not render individuals tlind, but which reduces their social and economic efficiency. The Committee conducted what is believed to be the first pre-school eye clinic during the past year, the report of which reveals that 50 per cent of the children in attendance, all under 7 years of age, had some eye ailment. The lighting promotion section of the Edison Lamp Works at Harrison, N. J., in cooperation with the Newark department of education and the National Committee, conducted cation and the National Committee, conducted cation and the National Committee, conducted a series of experiments on the effects of visual acuity of various amounts of light. Various intensities of light were shown and the indications were that for sight-saving classes, illumination should be greater than ten-foot candles, which is considered sufficient for normally sighted children. The results of a brief preliminary investigation suggest the desirability of carrying on a more intensive study of a ity of carrying on a more intensive study of a large group of children.

Among the publications issued by the Committee were the report on Conserving the Sight of School Children, prepared under the chair-manship of Dr. Thomas A. Wood, and the report of a survey of the school population of Jamestown, N. Y.

The number of sight-saving classes has steadily increased. The Committee reports the addition of 29 classes for school children with seriously defective vision, making a total of 234 such classes in the United States. In dealing with the prevention of blindness, the Committee has distributed bookmarks, bookplates, bulletins, folders and posters, and has inaugurated radio talks, lectures and motion picture exhibits show-ing the necessity for, and the methods for safeguarding the eyesight.

#### Studies In Vocational Information

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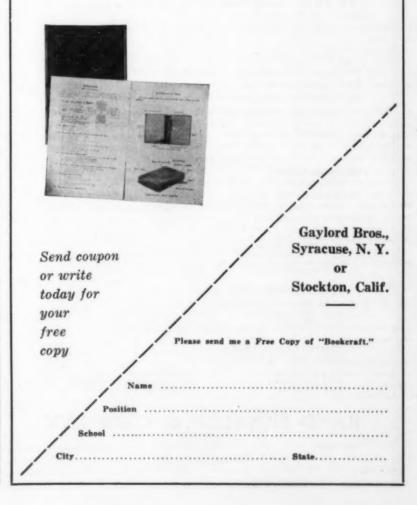
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Wisconsin Score Card for City School Buildings

Prepared by Mr. H. W. Schmidt and published y the State Department of Public Instruction, Madison, Wisconsin.

Madison, Wisconsin.

This score card follows the plan of a similar card for rural school buildings prepared by the author and by a group of his associates in the Wisconsin state department. It outlines a method of judging school buildings on an objective basis and takes into consideration a group of elements relating to the site, the building construction, classrooms, service systems, accessory rooms, and equipment. Standards are set up rooms, and equipment. Standards are set up for each division and subdivision and are weighted so that the total in a perfect building will result in a score of 1000.

will result in a score of 1000.

Score cards of this type have one general drawback. They set up a maximum standard which every school building is expected to reach and they involve points which are necessarily arbitrary because no scientific information is available as a beginning point for standards. To illustrate, the present score card calls for a site of not less than 150 square feet of unrestricted play space per child. It may be questioned whether any school ground need contain as much even as 100 square feet of play space, particularly in cities where school grounds are extremely expensive and where every square foot of unnecessary play space involves high first cost and a continuous interest charge. It would seem that a standard of this kind should be based upon a study of the outdoor play program in each given school system so that some relatively dependable amount of space could be required. required.

It must not be understood from the foregoing that the present score card contains many such ideal assumptions. The divisions on building construction, service systems, and equipment are based upon well established current practice. The card, as a whole, will give the city school superintendent a concrete method of judging

the school plant and of taking into account many factors that would be ordinarily overlooked. Objective tests such as this card sets up are always valuable.

The Merit System in Government

Report of the Conference Committee on the Merit System. 170 pages, cloth bound. Published by the National Municipal League, New York City.

This book engages in an exhaustive study of the functions of a public personnel agency, namely, a body that employs service and administers the same. The committee which is made up of such men as Henry W. Waite, H. W. Dodds, Wm. C. Beyer, Samuel H. Ordway, Charles P. Messick, and Harry W. Marsh, all identified by the strictly hadical property of the strictly hadical property. fied with national bodies concerned in civil service, succeeded in defining the scope and function of the personal agency in public service and in bringing many important facts connected therewith to the surface.

The magnitude of the personnel problem is pointed out, and the various forms of organization are described, and discussed as to merits and demerits. Adequate attention is given to the operation of personnel agencies, and a complete draft of state employment commisssion is presented.

Standard Historical Studies for United States History

Published by the Pioneer By S. E. Frost. Publishing Co., Fort Worth, Tex.

The purpose of the present historical outlines are fully thought out and standardized plan or course. The volume is divided into two parts and seeks to present the essential facts concernant seeks to present the essential facts concernant seeks to present the essential facts concernant seeks to present the student that the student seeks to present the set of the student seeks to present the seeks to present t ing history in such a manner that the student may be drawn into an attitude of appreciation of his relation to the social currents of human endeavor. The lessons contain a minimum amount of work to be done, but they also contain suggestions for any amount more that the teacher may elect to require. The book is pre-sented by the author with the hope that it will be a help to the student in the preparation of

his lessons, and to the teacher in the presenta-tion of the subject matter.

Elementary Accounting
Part II. By Hiram T. Scovill and Henry
Heaton Bailey. Cloth, 457 pages. D. C. Heath Heaton Bailey. Cloth, & Co., New York City.

This book familiarizes the student with accounting systems and the forms employed in the procedure of business. It goes into the practical side of things, and defines the operations of accounting in its several details. Typical transactions are engaged in and the various blanks, account sheets, and records come graphically into play.

The introductory chapters are devoted to columnar books and controlling accounts. Miscellaneous records and business papers are adequately dealt with. This is followed by the operations of cash and bank accounts and the basis of a complete voucher system.

The distribution of expenses and incomes by departments, and the practical aspects of a financial statement are entered into. The actual methods employed by efficiently organized offices are demonstrated step by step, thus not only giving the student a grasp of modern account-ing in its relation to buyer and seller, but also in placing guiding facts in possession of the executive.

Self-direction and Adjustment
By Norman Fenton. Cloth, 121 pages. Price,
\$1.40. World Book Co., Yonkers, N. Y.

This book is an excellent illustration of the This book is an excellent illustration of the recent growing appreciation of the possible contribution of psychology to the daily life and work of high school and college students. Briefly, it aims to find out both what can be improved in attitudes and methods of study, and also what is of value and service in approaching the intellectual life. It recognizes the strength as well as the weakness of the average student and attempts to aid him in average student and attempts to aid him in adjusting him to the needs and conditions of student life and work wherein he is least efficient. Thus it approaches the problem of (Continued on Page 157)

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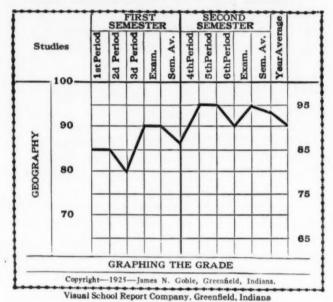
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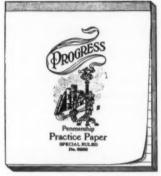
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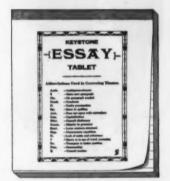
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(Continued from Page 155)

study in the hope of arousing the student to analyze self and to make self-direction and adanalyze self and to make self-direction and adjustment easier and more certain. Principles of mental hygiene are set forth, which are of value throughout life. The reader is made conscious of the fact that he is a person and has within his own grasp the development of his personality. personality.

The final chapter on the "encouragement of ideals and ambitions" touches upon the enjoyment of beauty in literature, and art, music and nature. It offers a list of authors and books—some of which we question—but it does not touch upon the broad problems of life, which the title would suggest.

The book is simple in vocabulary and clear in exposition, so that it is fully intelligible to the average high school student, and this is accomplished without a sacrifice of scientific accuracy, without literary exaggeration, and without "writing down" to juvenile life.

The Dental Assistant

By Emma J. McCaw. Cloth, 119 pages, illustrated. Price, \$1.50. C. V. Mosby Co., St. Louis, Mo.

Dentistry has risen so high in the scale of occupations that the present day doctor of dental surgery can hardly work efficiently without an assistant who is a laboratory technician and general factotum. Usually this assistant is a young woman with more or less general educations and the internal contents and the contents and the laboratory with the laboratory and the lab cation and training in laboratory work. Ideally she should have the education of a full-fledged registered nurse and that general information in physiology and hygiene, which has especial application to the teeth and mouth.

The present book outlines the duties of the dental assistant and presents the elements of the several sciences and arts with which she comes into constant contact—bacteriology, hygicomes into constant contact—bacteriology, hygi-ene, anatomy, and physiology, oral operating technique, anesthesia, and even the psychology of the dental office. In the case of the physical sciences the book reflects the practical experi-ence of the author. We can't help observing that the "little knowledge" such as the book conveys may be a dangerous thing, unless the

reader can supplement her study with more thorough and broader reading.

As an introductory survey, the book is a contribution to the growing list of works in contribution to the gr vocational information.

Manual of English

By G. B. Woods and Clarence Stratton. Cloth, 282 pages. Price, \$1. Doubleday, Page & Co., Garden City, N. Y.

This book is not meant to be a complete work on the art of writing and speaking, but aims to stress those principles which are necessary to the clear and effective presentation of ideas and to the clear and correct use of ordinary English.

The topics are arranged alphabetically with the idea that a book of this kind is most frequently used for reference, and therefore convenience must be the prime consideration. The authors have arranged an outline of contents for logical study for the benefit of teachers who may wish to use the book for ordinary classwork. The book takes up the manuscript, whole composition the preserve the secretary whole composition, the paragraph, the sentence, grammar, punctuation, spelling, letters and telegrams, diction, rhetorical principles and journalistic forms. Some of the quotations illustrating points in good practice might well represent subject matter of more lasting values and better adapted to the young people who are to read them.

Modern Biology
Harry D. Waggoner. Cloth, 482 pages. D.
C. Heath & Co., Boston.

The sub-title of this book "Its Human Aspects" explains the aim and spirit of the contents, which is a rather inclusive course in contents, which is a rather inclusive course in the fundamental facts of living beings and the theories and laws of life. Part One takes up seed plants and their importance as food for animals and particularly man. Part Two develops the subject of spore plants and devotes much attention to bacteria and human disease. Part Three discusses nutrition and health of the human body, and the phenomena of heredity in plants and animals. Part Four describes the entire range of animal life from the simplest protozoans to man. The types described most carefully are those which are of greatest value to human welfare.

to human welfare.

The author's descriptions of phenomena are accurate and complete, and in keeping with the latest findings. His discussions of debatable problems are not too clear and complete. He rather accepts the conclusions which appeal to him instead of stating the demonstrated facts and pointing out the difficulties and the "missing links" in many of the newer theories,—allowing the facts to tell their own story. His paragraphs on judgment in animals is an example of such a conclusion that is not well founded. The book is fully illustrated.

By Robert Louis Stevenson. Cloth, 259 pages. rice, \$.80. Published by E. P. Dutton & Co., Price, \$.80. Pub New York City.

My Work Book in Arithmetic
By Garry C. Myers and Caroline E. Myers.
Published by the Harter School Supply Co.,
Cleveland, O.

This book is both an introductory text in arithmetic and an effective silent reading book.

The book in its material and arrangement takes account of the individual differences of children in grades one and two. It aims to assist both the slow pupil and the brighter one and it makes the teacher's work more effective, relieving her of details for the more important work of guidance and constructive efforts. work of guidance and constructive efforts. Cards to accompany the material may be constructed by the pupils, or more attractive ones may be obtained from the publishers in packs of single cards, or in combinations.

Stories of Animal Village

By Emma Carcutt Richey. Cloth, 139 page Illustrated. Beckley-Cardy Co., Chicago, Ill. Cloth, 139 pages.

Illustrated. Beckley-Cardy Co., Chicago, Ill.

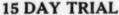
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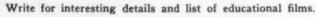
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Iroquois Arithmetics

By Harry De W. DeGroat, Sidney G. Firman, William A. Smith. Cloth bound, 350 pages. Published by Iroquois Publishing Company, Syracuse, N. Y.

Syracuse, N. Y.

This is book III intended for grades seven and eight. The authors in planning the series brought their experience as arithmetic teachers as well as the results of modern researches and surveys into service. They proceed upon the thought that many of the failures of the past have been due to the inability of the student to understand the language in which problems have been phrased. been phrased.

The first half of the book is designed to serve The first hair of the book is designed to serve the seventh grade, while the second half is de-signed to fit the eighth grade. There are drills and tests, problems and answers which cover studies in discount, commission, profit and loss, test, fire and life insurance, taxes, and the various business topics.

The eighth grade studies enter more deeply into arithmetical problems which deal with interest, stocks, bonds, mortgages and banking practice. A series of splendid illustrations, wherever these tend to make the lesson more

Clear, are provided.

Caleb Peaslee

By Frank K. Rich. Cloth, 342 pages. Price,
\$2, net. Published by Henry Altemus Co., Philadelphia, Pa.

This is an interesting character story in which the sturdiness and the unique philosophy of an old New England farmer is portrayed in a charming manner. The reader is carried into the peaceful atmosphere of rural life in Maine.

Social Arithmetic
Book Three. By Frank M. McMurry and C.
B. Benson. Cloth, 338 pages. Macmillan Company, New York, Chicago.

This textbook in arithmetic is one of a series prepared by two well known arithmeticians, one an instructor at Columbia University, and one at Purdue University. It has been issued with the idea that it may be used to answer many of the big questions pupils are obliged to consider, in their daily lives. It therefore takes up in an interesting way, the arithmetical aspects of American life. The facts presented are reliable and authoritative and have been gather-

ed from a variety of sources.

The book opens with a discussion of the value of an education and the desirability of a college education. In Part I are treated such topics as stocks and bonds, life insurance, changes in occupations and conditions of living, loans, in-terest and discounts, and banking. In Part II are discussed such important items as cost of distribution of goods, food supply, raw material, and expenses of state, local, and federal govern-

The supplement contains information per-taining to the metric system, square root and presents some useful rules and tables.

The book is a treasury of practical problems

in a rather new and interesting form and should prove helpful to teachers and pupils in junior high school classes

Jimmie and the Junior Safety Council By Stella Boothe. Cloth, 246 pages. Publish-



CHILDREN'S BOOK WEEK WILL BE OBSERVED, NOVEMBER 7 TO 13, 1926.

ed by World Book Company, Yonkers-on-Hud-son, New York City.

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road, automobile, and bicycle travel, in boating and swimming, and playing with matches. The dangers of electrical equipment, the handling of a Christmas tree and decorations, hallowe'en of a Christmas tree and decorations, hallowe'en sports, are enumerated. In each instance the safe way of doing things is pointed cut. Rules for playground operations are provided. Safety games and songs are introduced. The formation of a safety council is described.

Principles of Teaching Practically Applied

By Ruby Minor. Cloth, 281 pages. Price, \$1.90. Houghton Mifflin Co., New York, Boston, Chicago.

Chicago.

The principles of organizing classwork, of de-The principles of organizing classwork, of developing and teaching essential types of lessons, and the newer project method of teaching and socialized recitation form the burden of the book. While the general aims proposed in chapter one suffer from a narrow conception of life and education, the specific suggestions, based on the author's experience, show a wide background of practice and much practical wisdom.

—The Bureau of Collegiate Research of Columbia University has announced the completion of a series of achievement tests for high schools as a means of establishing and maintaining comparable standards of achievement, and reducing failures and maladjustments in college through correct placement.

The validity and reliability of the tests have been established through experimentation and use, under the guidance of Dr. B. D. Wood, the director of the Bureau, and with the collaboration of a number of specialists in the subjects. Six tests, comprising tests in English, French, Spanish, German, physics, and geometry are available this fall, and other tests will follow within a brief time.

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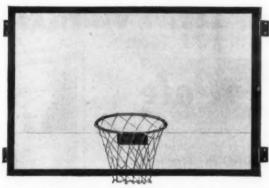
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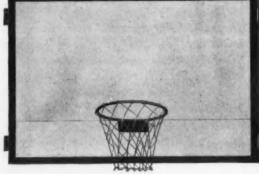
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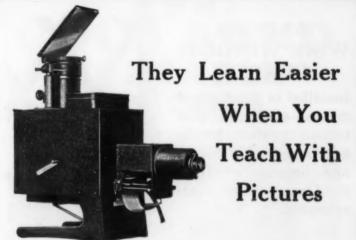
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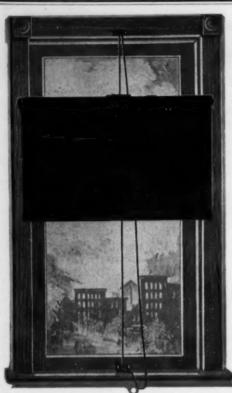
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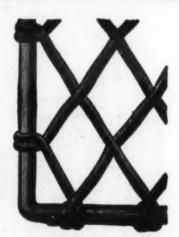
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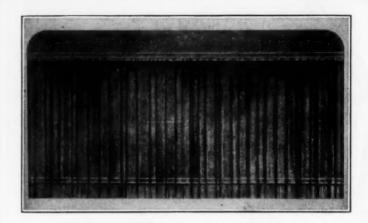


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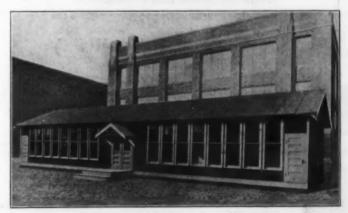


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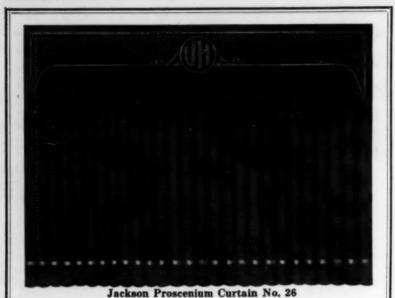
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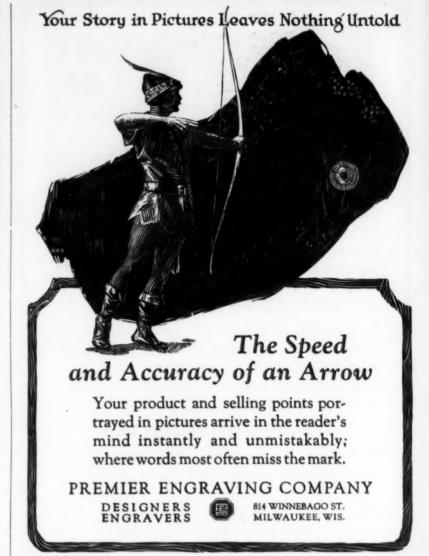
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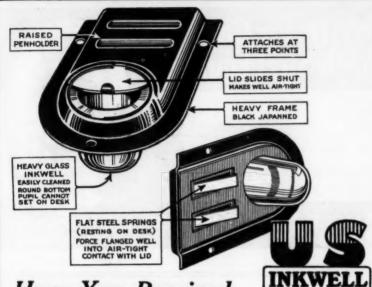
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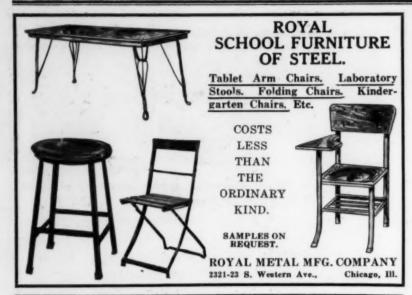
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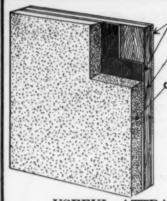


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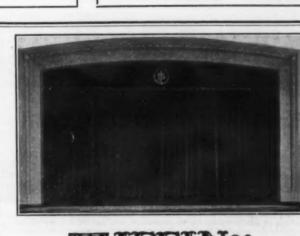
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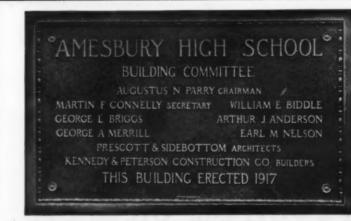
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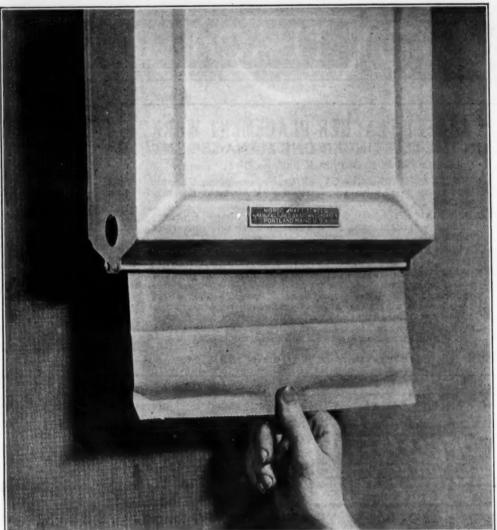
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(Continued on Page 173)

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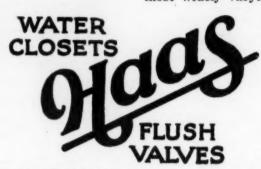
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(Continued from Page 171)

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Detroit Steel Products Company

WIRE GUARDS
Badger Wire & Iron Works
Cyclone Fence Co.
Logan Co. (Formerly Dow Co.)
Stewart Iron Works Co., The

#### ADVERTISERS' REFERENCE INDEX

Page	
Acme Partition Company145	
Acme Scenic Studios145	
Aeolian Company, The	
Aeroshade Company	
A P W Boner Company 2nd Cover	
Albertone Stone Company 146	
American Abrasive Metals Co187	
American Abrasive Metals Co187 American Book Company155	
American Crayon Company109	
American Fence Const. Co141	
American Laundry Machy. Co122	
American Crayon Company109 American Fence Const. Co141 American Laundry Machy. Co122 American Portable House Co168 American Seating Company21	
Amer Tablet & Stationery Co. 108	
Amer. Tablet & Stationery Co108 Anchor Post Iron Works120 Angle Steel Stool Company166	
Angle Steel Stool Company 166	
Annin & Co	
Arlington Seating Company 28	
Armstrong Company, The168	
Asbestos Buildings Company147	
Athey Company	
Automatic Pencil Sharpener Co., 165	
Badger Wire & Iron Works162	
Barnes & Company, A. S154 Beacon Steel Furniture Co149	
Beacon Steel Furniture Co149	
Beardslee Chandelier Mfg. Co 76	
Beck & Sons Co., The Wm         168           Berger Mfg. Company         115           Binney & Smith Company         120	
Birney & Smith Company 110	
Blair Company, J. C157	
Bonded Floors Co., Inc 77	
Bossert & Sons, Louis168	
Bonded Floors Co., Inc	
Brown Company	
Cabet Inc. Samuel 141	
Cabot, Inc., Samuel	
Carrier Air Conditioning & Eng.	
Co	
Carter-Bloxonend Flooring Co 79	
Century Brass Works, Inc146	
Chicago Gymnasium Equip. Co. 160	
Circle A Products Corp 94 and 101	
Cleveland Range Company, The.149	
Cleveland Range Company, The.149 Clow & Sons, James B128 Colt's Pat. Fire Arms Mfg. Co134	
Colt's Pat. Fire Arms Mfg. Co134	
Columbia Mills, Inc 9 Columbia School Sup. Co34 and 35	
Continental Chemical Corp163	
Continental Scale Works 82	
Copper & Brass Research Ass'n. 13	
Cyclone Fence Company	
Derby & Co., Inc., P 22	
Detroit Steel Products Co 71	
Deven Corporation The 161	
Dougherty & Sons. Inc., W. F., 184	
Detroit School Equipment Co 26 Detroit Steel Products Co 71 DeVilbiss Mfg. Company, The 142 DeVry Corporation, The 161 Dougherty & Sons, Inc., W. F 134 Draper Shade Co., Luther O 145 Dunham Company, C. A 114 Du Pont De Nemours & Co., E. I. 130 Durabilt Steel Locker Co 97	
Dunham Company, C. A114	
Du Pont De Nemours & Co., E. I. 180	
Durand Steel Locker Co	
Duriron Co., Inc., The	
Ebinger San. Mfg. Co., The D. A.142	
Economy Mfg. Co., Plant No. 2. 18	
Du Pont De Nemours & Co., E. I. 130 Durabilt Steel Locker Co	
Finnell System, Inc 80	

Page
Fowler Paper Co., W. A156
Freet Mfg Company The 114
Gaylord Brothers
General Boilers Company 5
Graybar Electric Co. Inc. 91
Gregg Publishing Company156
Gunn Furniture Company 30
Haas Company, Philip
Hamilton Mfg. Company, The148
Hamlin, Irving
Harter School Supply Co107
Hartshorn Company, Stewart 8
Heggie Simplex Boiler Co117
Heywood-Wakefield Co 83
Hill Standard Company 95
Hoffmann & Billings Mfg. Co128
Holden Patent Book Cover Co104
Imperial Brees Mfg Co. 146
Indiana Limestone Company 72
Invincible Vacuum Cleaner Mfg.
Jackson Corp. A. P 164
Jacobus School Products Co., The 32
Johnson Service Company 2
Kewanee Boiler Company 8
Kewaunee Mfg. Company118
Keystone View Company167
Kundtz Company, The Theodor. 25
Laidlaw Brothers
Leavitt Mfg. Company
Lee Lash Studios
Leitz, Inc., E
Longmans Green & Co153
Lord & Burnham Company 73
Lynn Company, James 32 Lyon Metallic Mfg. Company, 83
Maple Flooring Mfrs. Assn 78
Marietta Mfg. Company159
Maxwell & Co., S. A
Medart Mfg. Co., Fred74 and 98
Mershon & Morley Co
Miessner Piano Company103
Miller Keyless Lock Co., The J. B.166
Milwaukee Corrugating Company 99
Milwaukee Dustless Brush Co187
Mitchell Manufacturing Co159
Monroe Calculating Machine Co 24
Muller, Inc., Franklyn R 85
Murdock Mfg. & Sup. Co., The.142
Mutschler Bros. Company 18
Narragansett Machine Co159
Fage Fowler Paper Co., W. A
National Crayon Company 32
National School Equipment Co. 27
National Vulcanized Fibre Co165
Natural Slate Blackboard Co 1
Natural Slate Blackboard Co 1 Nelson Corp., The Herman 11 Nelson Mfg. Co., N. O 129 and 164 Never-Split Seat Company 146 Newson & Company 156 New York Blue Print Paper Co.161
Never-Split Seat Company146
Newson & Company
New York Blue Print Paper Co, 161

		Par
3	N. Y. Silicate Book Slate Co. Nichols-Lintern Co. Norton Door Closer Co. Nystrom & Co., A. J. Page Fence & Wire Prod. Ass' Palmer Company, A. N. Palmer Company, The. Peabody School Furniture Co. Peerless Unit Vent. Co., Inc. Peterson & Co., Leonard Pick & Co., Albert. Potter Manufacturing Corp. Premier Engraving Company. Premier Engraving Company. Puro Sanitary Drinking Fou	1
i	Nichols-Lintern Co	. 1
ī	Norton Door Closer Co	1
1	Nystrom & Co., A. J	
1	Page Fence & Wire Prod. Ass'	n. 1
1	Palmer Company, A. N	1
1	Palmer Company, The	1
1	Peabody School Furniture Co.	
1	Peerless Unit Vent. Co., Inc.,	
1	Peterson & Co., Leonard	
1	Pick & Co., Albert	
1	Potter Manufacturing Corp	1
1	Premier Engraving Company	1
1	tain Co	ın-
	tain Co	1
ř	and Kardex Bureau	1
ļ	Rand, McNally & Company	1
3	Readsboro Chair Company	0.0
3	Remington Typewriter Co	1
3	Rinehimer Bros. Mfg. Co	
]	Royal Metal Mfg. Company	1
1	Rundle-Spence Mfg. Co	1
1	Russell & Sons, Albert	1
200	Sani Products Company	1
200	Sanymetal Products Company.	
2	sargent & Company	
200	Scientific Seating, Inc	
2 70	shaw-walker	1
200	sheldon & Company, E. H	1
2	sonneborn Sons, Inc., L	
200	Spencer Lens Company	1
2	spencer Turbine Company	
2	Stafford Mig. Co., E. H	
2	Standard Blackboard Co	1
8	Standard Electric Time Co., T	he.
8	Rand, McNally & Company. Readsboro Chair Company. Readsboro Chair Company. Remington Typewriter Co. Rinchimer Bros. Mfg. Co. Royal Metal Mfg. Company. Rundle-Spence Mfg. Co. Russell & Sons, Albert. Sani Products Company. Sargent & Company. Scientific Seating, Inc. Shaw-Walker Sheldon & Company. Brencer Lens Company. Spencer Lens Company. Stafford Mfg. Co., E. H. Standard Blackboard Co. Standard Electric Time Co., Tscedman Products Company. Stedman Products Company.	1
8	Steele Mfg. Co., Oliver C	1
5	Steel Furniture Company	!
S	Steel Furniture Company Steffens-Amberg Company	1
5	Sterling Products Co. The	- 1
S	Structural Slate Company Cannewitz Works, The Caylor Company, Halsey W Cell City Chair Company	1
η	Cannewitz Works The	1
ή	Caylor Company, Halsey W.	. 1
ή	Cell City Chair Company	
ή	Ciffin Scenie Studios	1
ή	l'iffin Scenic Studios	4 . 4
n	Proper I no Doulight Distress	
4	Frans-Lux Daylight Picture	
n	Screen Corp Triple Metals Corp Truscon Steel Company8 a	
7	Triple Metals Corp	
1	ruscon Steel Companys	na
1	Twin City Scenic Company Inderwood Typewriter Co	1
Ų	Inderwood Typewriter Co	1
ι	J. S. Gutta Percha Paint Co.	1
Į	Jnion School Furnishing Co J. S. Inkwell Company	
Į	J. S. Inkwell Company	1
ί	Iniversal Scenic Studio, Inc.	1
ī	Universal Scenic Studio, Inc Universal Window Company Van Range Company, John	
3	Jan Range Company John	1
*	Visual School Report Company	
4	Variable Company	0
3	Vogel Company, Jos. A2nd Volland Scenic Studios	UUV
1	Johnsont Handware Com	1
1	Vonnegut Hardware Company Vortex Mig. Company Waterman-Waterbury Compan Wayne Iron Works	
1	ortex Mig. Company	
1	waterman-waterbury Compan	y.1
1	Wayne Iron Works	13
1	Wearproof Mat Company	1
١	Weber Costello Company	!
١	Weis Mfg. Co., Henry	1
1	Wearproof Mat Company Weber Costello Company Weis Mfg. Co., Henry Western Shade Cloth Company	
3	Wiese Laboratory Furniture Co	
3	Williams Divot Seek Co.	91
7	Williams Pivot Sash Co., The.	
1	Wilson Corp., Jas. G Winston Company, The John C Yawman & Erbe Mfg. Co	1
1	winston Company, The John C	1
	awman & Erbe Mfg. Co	10
3	foung Pump Company	



The Advantages of a Puritanical Outlook During an examination at his school, Jimmy came across a question that absolutely floored him. It was this:

came across a question that absolute him. It was this:

"If one horse can run a mile in a minute and a half and another is able to do the same distance in two minutes, how far ahead would first horse be if the two ran a race of two miles at these respective speeds?"

At last a bright idea struck him. He returned his paper with the query unanswered, but with the following comment: "I refuse to have anything to do with horse-racing."—Pickwick.

One for Him

A schoolmaster met two students out for a
walk when he knew they ought to be at their lessons.

lessons.

Going up to them, he took out his notebook and pencil to jot down their names.

"Now, sir," he said to one of them, "what might your name be?"

"William Makepeace Thackeray, sir," answered the boy.

"What, sir? Do you mean to tell me that your name is William Makepeace Thackeray?" cried the master.

"Sir," replied the student, gravely, "you asked me what my name might be, not what it is."

A Perilous Situation
"The wideawake student," observes a university man, "occasionally puts a question which the next minute he will regret. In this relation

one recalls a story told by a Yale instructor who was lecturing on oxygen.

"'Oxygen,' said he 'is essential to all animal existence. There could be no life without it. Yet, strange to say, it was discovered only a century ago.'

century ago.'
"'What did they do, then, sir,' a student asked, 'before it was discovered?'"—Harper's Magazine.

A Very Personal Touch The professor had asked time and again for the students to put a more personal touch in their themes, so one of the papers which he received ended thus: "Well, professor, how are the wife and kiddies? And, by the way, before I forget it, could you lend me five dollars?"—Penn Punch Bowl.

Frenzied Arithmetic Frenzied Arithmetic

"In order to subtract," said the teacher, addressing the youthful class in mathematics, "things have to be in the same denomination. For instance, we couldn't take three pears from four peaches, nor eight horses from ten cats. Do you understand?"

General assent, but a timid hand raised in the

rear.
"Well, Bobby, what is it?"
"Please, teacher, couldn't you take three quarts of milk from three cows?"



Chicago Tribune

THE MAIN REQUIREMENT OF A MODERN INSTI-TUTION OF HIGHER LEARNING.

#### YE-SAP'S PED-A-GOG-IC FABLE

YE-SAP'S PED-A-GOG-IC FABLE
Once there was a Teach-er who Ex-pect-ed a
Con-tract. She Knew she was Good.
She never Wor-ried. Wor-ry made Wrink-les.
It did not Bother her if she En-rolled all the
Trans-ferred Chil-dren. She said it was only
Fair to the Child to put his Name with the Rest.
She never Pre-pared her Work. What Dif-ference did it Make? She had No-ticed that Bright
Chil-dren Learned Any-way and Why Both-er
the Dumb Ones. She did not care if the Sub-stitute had no Plan or Pro-gram that Mon-day she
was Sick in New York. She could Read to the
Class. And when the Sup-er-in-tend-ent came was Sick in New York. She could Read to the Class. And when the Sup-er-in-tend-ent came into the Room as she was Ruler-ing a Child she did not Get Fussed. He Never Noticed, she

And all the Su-per-vi-sors Ac-claimed her, saying: Such Re-source-ful-ness! How Charming-ly Non-cha-lant! She De-serves the Two Hun-dred Dol-lars In-crease she Re-ceived.—Atlantic City, N. J., School Bulletin.

#### The Wrong Race

"Ernest," said the teacher of geography, "tell what you know about the Morgolia ace."
"I wasn't there," explained Ernest hastily. "I went to the ball game."

#### In Europe

Teacher—"Tell me what are the changes which have taken place in the map of Europe since 1914?"

Boy-"It has been varnished!"-Pele Mele.

#### She Didn't Know Walter

"Dear Miss Flint," wrote an anxious mother to the teacher of her little boy, "I'm afraid Walter isn't trying hard enough."

"You are quite wrong, madam," wrote back the acher. "Walter is the most trying boy in the teacher. class.



Conoidal Fans. The Buffalo Forge Co., of Buffalo, N. Y., has issued Catalog No. 475, describing and illustrating the complete series of sizes of the conoidal fan for ventilation purposes. The series ranges from the small No. 1 fan, delivering 78 cubic feet of air per minute, to the No. 6, delivering 6,850 cubic feet per minute. The large capacity range is amplified by the use of multiblade wheels of three distinct types—the Niagara, the Duplex, and the Turbo—in sizes 4, 5, and 6.

The circular describes the construction of the Conoidal fans, gives sizes and dimensions, and offers typical installations for use in hotels and restaurants, in motion-picture booths, and in

Information concerning the Conodial fans may be obtained by writing to the Buffalo Forge Co., at Buffalo, N. Y.

#### Trade Publications

Under this title, Graham Bros., of Detroit, Mich., have issued a forty-page book-let, giving the essential facts for the selection of school buses, and explaining the special service rendered by the firm to school official ice rendered by the f throughout the country. officials

The buses are particularly designed for the transportation of children and are of four types: The parlor car coach, the school bus, the street car coach, and the carry-all. The chassis is of advanced design and sound engineering, the wheels and tires are of sturdy, heavy-duty type, and the power is obtained from Dodge engines, which make the buses safe, dependable and and the power is obtained from Dodge engines, which make the buses safe, dependable, and comfortable. A light-weight chassis, high-grade materials, and a high efficiency engine make for economical use of gas, oil, and tires, and reduce the wear and tear on the vehicle.

The seats are of two types: The lengthwise type, with comfortable seats and backs, upholetered in leatherette; and the standard street care

stered in leatherette; and the standard street car type, with seats on both sides of an aisle.

A wide entrance and exit door of the folding type is located at the front on the right, and provision is made for entrance or exit through an emergency door at the rear. The windows are of the single-sash type, fitted with heavy glass. They are made to slide down between the seat back and body side, and are equipped with anti-rattlers.

Six electric light bulbs furnish excellent light, and a hot exhaust from the engine carries the heat into large pipes on either side, furnishing efficient heating facilities for cold weather.

Bookcraft. This is a most unusual type of catalog in the fact that it is prepared by a Director of Vocational Education, and suggests the complete use of the product from the re-casing of the book right through to all the various processes of binding.

Gaylord Bros. have certainly made a most ex-Gaylord Bros. have certainly made a most exceptional contribution to the art of catalog writing. "Bookcraft" not only describes how bookbinding may be done, but the entire process is presented from the Department of Vocational Education where books may be repaired as a regular daily problem of industrial activity.

Copies may be obtained on request from Gaylord Bros., Syracuse, N. Y., or Stockton, Calif.

Locker Finishes Adapted to Different Wall Finishes. The Durabilt Locker Co., of Aurora, Ill., has issued an illustrated circular, showing color plates of locker installations for the benefit of architects, school boards, and others interested in locker beauty and distinction.

The circular shows locker installations in four colors—green, gray, brown, and blue—which

The circular shows locker installations in four colors—green, gray, brown, and blue—which have been developed to meet various demands for individuality in interior decoration. The lockers harmonize with marble, tile wainscoting, or other interior trim. They are designed to give a permanently satsfactory installation, and embody the features of sturdy construction, beautiful finish, and durability. The colored lockers are installed in many of the finest buildings and wherever appearance, service, duraings and wherever appearance, service, durability, and economy are considered.

School authorities, or architects, interested in locker installations, should address their inquiries to the Durabilt Steel Locker Co., 462 Arnold Ave., Aurora, Ill.

Buffalo Electric Blowers. The Buffalo Forge Co., of Buffalo, N. Y., has issued an illustrated circular showing the construction of the FB variable and constant speed electric blowers wariable and constant speed electric blowers which have been produced for a variety of uses. The first is made in two sizes, and is used for supplying air to forge fires, as well as for other intermittent service. The second is made in seven sizes, and is used for blowing oil and gas furnesses and for energie work. furnaces and for cupola work.

The firm also makes smaller sizes of blowers for use in small furnaces, for removing scale from power hammers, and chips in metal and woodworking operations, as well as for exhausting from grinding and buffing wheels.

The circular contains a number of multi-rating

tables, showing the capacities at different speeds, the pressure at which the air is delivered, and the horsepower required.

Information concerning electric blowers for all kinds of uses may be obtained by writing to the Buffalo Forge Co., at Buffalo, N. Y.

Buffalo Forge Co., at Buffalo, N. Y.

Potter Safety Playground Slide. The Potter Mfg. Corporation, of Chicago, Ill., has marketed an enclosed playground slide of the tunnel type, embodying the tunnel feature of their fire escapes, and permitting children to play without danger to life or limb.

The potter tunnel slide, which is of all-metal construction, is safe, clean, and durable, and simple in erection. The sliding surface is always clean and protected from the weather, which makes it more durable than the open slides. The stairway, with its wide treads, short risers, and hand rails, make it easy for small children to climb, and eliminates the danger of falling. The door to the tunnel may be locked open when in use, or closed when the slide is not in use.

Information concerning the Potter playground slide may be obtained by writing to the Potter Mfg. Corporation at 1862 Conway Building, Chi-

Prizes for High School Students
Cash prizes amounting to \$1,500 are offered
by the publishers of the Scholastic for creative writing on poetry, short story, essays and dramatization. Superintendent William M. Davidson of Pittsburgh, Pa., is the chairman on awards. The contest will close on March 20, 1927. The Pittsburgh Plate Glass Company has

sponsored the awards.

A Historical Fact School had begun, and the class in history

school had begun, and the class in history was in session.

"Now, Bobby," said the teacher, "by whom was the Declaration of Independence written?"

"Thomas Jefferson," said Bobby.

"Correct," said the teacher. "And now, Willie, you may tell me where it was signed."

"Right at the bottom, ma'am," said Willie.



The Mt. Pleasant Branch of the Washington, D. C., Public Library —The "Browsing Room"

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   2. Weisteel special-design universal
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  - 6. Weisteel Cooperative Plan saves you time and cost.

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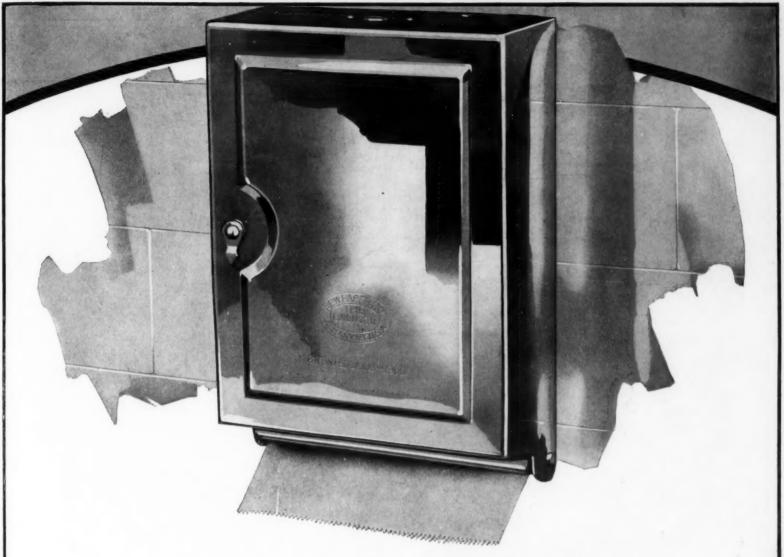
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